					DEPARTMEN	T OF NA	OF UTAH ATURAL RESO GAS AND M					AMENDED RE	FORM 3 PORT	
		APPL	ICATION FOR	PERMIT	T TO DRILL					1. WELL	NAME and NU	MBER e Tribal 12-03	-E4	
2. TYPE OF		ILL NEW WELL	REENTER P&	A WELL (	DEEPEN	I WELL [	<u> </u>			3. FIELD	OR WILDCAT	UNDAGE CANY	ON	
4. TYPE OF	WELL	Oil W	ell Coalbe	d Metha	ane Well: NO					5. UNIT c	or COMMUNIT	IZATION AGRE	EMENT N	AME
6. NAME OF	OPERATOR	0 11	PETROGLYPH O							7. OPERA	ATOR PHONE	208 685-768		
8. ADDRESS	OF OPERATOR	960 Bros	adway Avenue, St							9. OPER	ATOR E-MAIL	powell@pgei.co		
	LEASE NUMBER		duway Avenue, St	11. MIN	IERAL OWNER	SHIP			error III		ACE OWNERS			
	1420	H624744	201	FEDE	ERAL INI	DIAN 🛄	) STATE (	) FEE	_	FEDER			ATE ()	FEE (III)
	F SURFACE OWN	<u> </u>	Petroglyph Oper	ating Co	o., Inc.							435-722-253	1	
15. ADDRES	SS OF SURFACE O	OWNER (if box 12	= 'fee') P.O. Box									E-MAIL (if bo	x 12 = 'fee'	')
17. INDIAN ALLOTTEE OR TRIBE NAME (if box 12 = 'INDIAN')  Ute Indian Tribe  18. INTEND TO COMMINGLE PRODUCTION FROM MULTIPLE FORMATIONS  YES (Submit Commingling Application) NO									_	19. SLAN		ECTIONAL 📵	HORIZO	ONTAL ()
20. LOCAT	ION OF WELL		FO	OTAGES	s	Q.	TR-QTR	SEC	TION	то	WNSHIP	RANGE		MERIDIAN
LOCATION	AT SURFACE		469 FNI	L 1718	FWL	ļ ,	NENW	7	2		5.0 S	4.0 W		U
Top of Upp	ermost Producin	g Zone	660 FNI	1980	FWL	ı	NENW	1	2		5.0 S	4.0 W		U
At Total Depth 660 FNL 1980 FWL NEW								1	2		5.0 S	4.0 W		U
21. COUNTY  22. DISTANCE TO NEAREST LEASE LINE (Feet) 469										23. NUME	BER OF ACRE	S IN DRILLING 480	UNIT	
25. DISTANCE TO NEAREST WELL IN (Applied For Drilling of Completed) 2142								POOL		26. PROF	POSED DEPTH MD:	6073 TVD:	6056	
27. ELEVATION - GROUND LEVEL 28. BOND NUMBER											RCE OF DRILL	VAL NUMBER	IF APPLICA	ABLE
		5968			Hole, Casing		138153					43-8342		
String	Hole Size	Casing Size	Longth		Weight	··	e & Thread		/lax Mud	10/4	Cement	Sacks	Yield	Weight
Cond	20	14	0 - 54		5.0		Jnknown         10.0         Class G         25         1.17         15.8							
Surf	12.25	8.625	0 - 494		24.0		55 ST&C		10.0		Class G	227	1.17	15.8
Prod	7.875	5.5	0 - 607	3	15.5	J-							12.5	
											Class G	344	1.46	13.4
ATTACHMENTS										•				
VERIFY THE FOLLOWING ARE ATTACHED IN ACCORDANCE WITH THE UTAH OIL AND GAS CONSERVATION GENERAL RULES														
WELL PLAT OR MAP PREPARED BY LICENSED SURVEYOR OR ENGINEER									COMPLETE DRILLING PLAN					
AFFIDAVIT OF STATUS OF SURFACE OWNER AGREEMENT (IF FEE SURFACE)								FORM 5. IF OPERATOR IS OTHER THAN THE LEASE OWNER						
DIRE	CTIONAL SURVE	Y PLAN (IF DIREC	TIONALLY OR HO	RIZONT	ALLY DRILLED	D)	<b>№</b> торо	GRAPHIC	AL MAP					
NAME Ed T	rotter				TITLE Agent		1		PHONE	435 789	9-4120			
SIGNATUR				$\neg$	<b>DATE</b> 11/02/2	2012			EMAIL	edtrotter	@easilink.com			
	API NUMBER ASSIGNED 43013518430000 APPROVAL													
	Permit Manager													

### CONFIDENTIAL

# NINE POINT DRILLING PLAN PETROGLYPH OPERATING COMPANY, INC UTE TRIBAL 12-03-E4 NE NW, SEC 12, T5S, R4W DUCHESNE COUNTY, UTAH

#### 1. ESTIMATED TOPS OF IMPORTANT GEOLOGICAL MARKERS:

Formation		Subsea	TVD	MD
Rig KB=~14' above GGL		5981	0	0
Surface Formation = <b>Uinta</b>				
Uinta		5967	14	14
Green River		4770	1211	1213
Trona		3440	2541	2550
Mahogany Shale		3290	2691	2701
"B" Marker	 	2155	3826	3842
"X" Marker	) ) ) (1)	1660	4321	4338
Douglas Creek Marker	inte	1512	4469	4486
"B" Limestone	Waterflood Unit Interval	1115	4866	4883
Base Castle Peak Limestone	> 5	570	5411	5428
BSCARB		175	5806	5817
Wasatch		-90	NDE	NDE
Rig TD		-75	6056	6073

# 2. ESTIMATED DEPTHS OF ANTICIPATED WATER, OIL, GAS OR MINERAL FORMATIONS:

Substance	Formation	Subsea	TVD	MD
Base of moderately saline ground	Uinta	5950	31	31
water*				
Oil/Gas	Douglas Creek	1512	4469	4486
Oil/Gas	Castle Peak	570	5411	5428

Any water encountered during drilling shall be sampled, analyzed and reported to BLM, Vernal office using State of Utah DOGM Form 7 Report of Water Encountered during Drilling. The following analyses shall be performed on any water encountered:

Flow rate (or blowtest) Temperature pH TDS

Dissolved Iron Dissolved Magnesium Dissolved Bicarb. Dissolved Sulfate
Dissolved Calcium Dissolved Sodium Dissolved Carbonate Dissolved Chloride

All depths through the "Base of moderately saline ground water", along with any water encountered below that depth which is less than 10,000 TDS, shall be protected by the surface casing or by lifting the cement of the production casing into the surface casing.

<sup>\*</sup>Base of Moderately Saline Groundwater from Howells, Longson and Hunt, 1981, Utah State Technical Publication 92: The Base of the Moderately Saline Water in the Uinta Basin, Utah



# NINE POINT DRILLING PLAN PETROGLYPH OPERATING COMPANY, INC UTE TRIBAL 12-03-E4 NE NW, SEC 12, T5S, R4W DUCHESNE COUNTY, UTAH

#### 3. PROPOSED CASING PROGRAM:

String	Hole	Casing	Top - MD	Bottom - MD	Weight lb/ft	Grade	Thread
Conductor	20"	14"	surface	54'	steel	Cond'r	none
Surface	12-1/4"	8-5/8"	surface	494'	24	J-55	STC
Production	7-7/8"	5-1/2"	surface	6073'	15.5	J-55	LTC

String	Hole	Casing	Collapse	Burst	Tensile
Surface	12-1/4"	8-5/8"	1,370 psi	2,950 psi	244,000 lb
Production	7-7/8"	5-1/2"	4,040 psi	4,810 psi	248,000 lb

- All casing will be new or inspected.
- The surface and production strings shall have a minimum of one (1) centralizer on each of the bottom three (3) joints.
- The production string shall have a minimum of one (1) centralizer for every three (3) joints from TD to the top of the "B" marker at 3842'MD.

#### 4. PROPOSED CEMENTING PROGRAM:

String	Top Bottom	Cement Description	Sacks Vol (ft³)	Excess	Weight (ppg)	Yield (ft³/sk)
Conductor	0 54	Construction Grade Cement	Sufficier	nt volumes	to grout Co	onductor
Surface	0 494	Class G +2% CaCl2 +0.25 lb/sk Cello Flake	227 265	30%	15.8	1.17
Production Lead	0 3842	EXPANDACEM (Class G +additives) + 1 lb/sk Granulite TR¼ (LCM)	451 866	30%	12.5	1.92
Production 3842 Tail 6073		EXPANDACEM (Class G +additives) + 1 lb/sk Granulite TR¼ (LCM)	344 503	30%	13.4	1.46

- The 8-5/8" surface casing shall be cemented back to surface. In the event that during the primary surface cementing operation the cement does not circulate to surface, or if the cement level should fall back more than 8 feet from surface, then a remedial surface cementing operation shall be performed to insure adequate isolation and stabilization of the surface casing.
- The 5-1/2" production casing shall be cemented back to surface. In the event that during the primary cementing operation the cement does not circulate to surface, a remedial cementing operation shall be performed only if necessary to lift cement above the Trona at 2550'MD.



NINE POINT DRILLING PLAN
PETROGLYPH OPERATING COMPANY, INC
UTE TRIBAL 12-03-E4
NE NW, SEC 12, T5S, R4W
DUCHESNE COUNTY, UTAH

#### 5. MINIMUM PRESSURE CONTROL AND SAFETY EQUIPMENT:

- An 8", 2000 PSI, Double Ram BOPE with Hydraulic Closing Unit shall be used.
- A 2000 PSI Working Pressure Annular shall be used.
- The flowline shall have a minimum diameter of 10".
- Auxiliary equipment shall be a Kelly Cock, Bit Float, and a TIW valve with drill pipe threads.
- Spark arrestors shall be equipped on all engine exhausts within 100 feet of the wellbore.
- See attached 2,000 psi BOP schematic diagram.

#### **BOPE TESTING PROCEDURE:**

• The BOPE shall be tested by a professional tester to conform to Onshore Order #2.

#### 6. MUD PROGRAM:

#### A. SURFACE HOLE

- The surface hole will be drilled with an air/mist system from 0' to 494'. All cutting shall be directed to pit.
- A trailer-mounted compressor with a capacity of 2000 CFM will be used. Compressor will have a safety shut-off valve located less than 15 feet from the driller's controls of the rig.
- The rat and mouse holes will be drilled with the air rig after surface casing is cemented.
- The 140 barrel water truck used with the deduster will be the source of kill fluid in the highly unlikely event of pressure being encountered during drilling of the surface hole.
- Operator requests the following variances from Onshore Order 2 part E during drilling of the surface hole. Operator will use air drilling techniques only on surface hole:
  - Operator requests a variance to regulations requiring the blooie line discharge to be 100' from the wellbore. Due to reduced location size, the blooie line discharge will be approximately 75' from the wellbore and securely anchored.
  - Operator requests a variance to regulations requiring an automatic igniter or continuous pilot light on the blooie line. A mister shall be on the end of the blooie line.
  - Operator requests a variance to regulations requiring compressors be located in the opposite direction from the blooie line; a minimum of 100' from the wellbore. Due to the reduced location size, the compressors shall be located as close as is reasonable to the opposite direction from the blooie line and 75' from the wellbore.
  - o Operator requests a variance to regulations requiring a BOPE on the hole when drilling the surface hole. An air bowl shall be utilized on the diverter system in place of a BOPE.



# NINE POINT DRILLING PLAN PETROGLYPH OPERATING COMPANY, INC UTE TRIBAL 12-03-E4 NE NW, SEC 12, T5S, R4W DUCHESNE COUNTY, UTAH

#### B. PRODUCTION HOLE

- The production hole shall be drilled with a freshwater polymer system from 494' to 6073'. LSND mud if conditions warrant.
- Clay inhibition and hole stability shall be achieved with a Diammonium Phosphate (DAP) additive or similar source of clay-stabilizing ions. Anticipated mud weight is 8.3-8.8 lbs/gal. although mud weight up to 10lbs/gal may be used if necessary to prevent wellbore wall instability due to the planned inclination of the well.
- All cuttings and circulating medium shall be directed into the reserve pit. Total Dissolved Solids (TDS) are anticipated to be less than 3000 PPM.
- Sufficient mud inventory will be maintained on location in either tanks or the reserve pit during the drilling of the production hole to handle any adverse conditions that may arise.
- If necessary to control formation fluids or pressure, the system will be weighted with the addition of bentonite gel, and if pressure conditions warrant, with barite. Enough material shall be maintained on location to allow for the mudweight to be raised to 10.5 lbs/gal should need arise.
- During drilling operations, pit levels and flow from the well shall be monitored by instrumentation to include at least: a pit volume totalizer (PVT), a stroke counter, and a mud-flow indicator.
- A mud-gas separator shall be available on location.

#### C. HAZARDOUS MATERIALS AND POLLUTANTS

- Chromate additives **shall NOT** be used in the mud system on Indian lands without prior DOGM approval to ensure adequate protection of freshwater aquifers.
- Chemicals subject to reporting under SARA Title III in an amounts equal to or greater than 10,000 pounds annually **shall NOT** be used, produced, stored, transported, or disposed of in association with the drilling, testing, or completion of this well.
- Extremely hazardous substances, as defined in 40 CFR 355, in threshold planning quantities shall NOT be used, produced, stored, transported, or disposed of in association with the drilling, testing, or completion of this well.
- Hazardous substances specifically listed by the EPA as a hazardous waste, as defined in 40 CFR 261 (D), or any substances that through their use would lead to the generation of a hazardous waste, **shall NOT** be used in association with the drilling, testing, or completion of this well.



# **CONFIDENTIAL**

# NINE POINT DRILLING PLAN PETROGLYPH OPERATING COMPANY, INC UTE TRIBAL 12-03-E4 NE NW, SEC 12, T5S, R4W DUCHESNE COUNTY, UTAH

#### 7. EVALUATION PROGRAM:

Logs: Triple Combo TD to base of surface casing (AIT, DSN, CDL)

Base of surface casing to surface (GR only)

Cores: None planned

DST: None planned

Testing: Operator plans no testing until the completion phase of the well.

#### 8. ANTICIPATED ABNORMAL PRESSURE OR TEMPERATURÉ:

- Operator anticipates Bottom Hole Temperatures below 150°F, the maximum temperature for DAP drilling fluids.
- No H<sub>2</sub>S has been encountered or is known to exist from previous drilling in the area at this depth.
- Maximum pressure for hydrocarbon bearing zones at native conditions in this area is approximately 1518 PSI (0.25 PSI/ft gradient).
- This well is NOT in the vicinity of active injection wells. Nearby active injection can cause pressures up to a 0.433 PSI/ft gradient.

#### 9. DIRECTIONAL WELL PLAN:

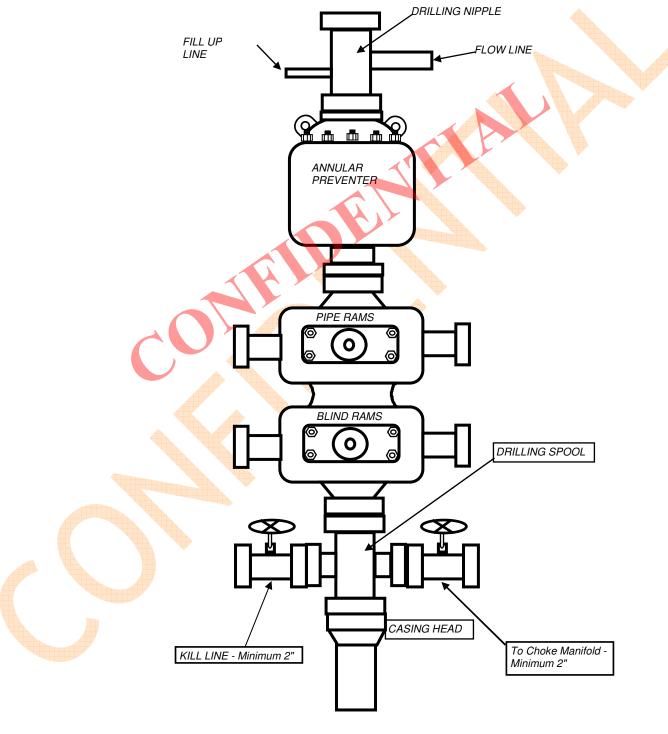
- Well shall be drilled directionally in order to limit surface disturbance.
- A Positive Displacement Motor with a bent sub of 1.25° to 1.75° will be used to control well path.
- A directional survey shall be taken at least one (1) time per 100' of drilling.
- Anti-collision equipment will not be used as there are no existing wells in the vicinity of the proposed well path.
- While cutting the Waterflood Unit Interval from 3842' to 5817', the actual well path may be allowed to vary up to 100' horizontally from plan in order to prevent excessive slide drilling.

  Above and below the Waterflood Unit Interval, variances in excess 100' horizontally from plan may be allowed.
- Directional drilling plan is attached.



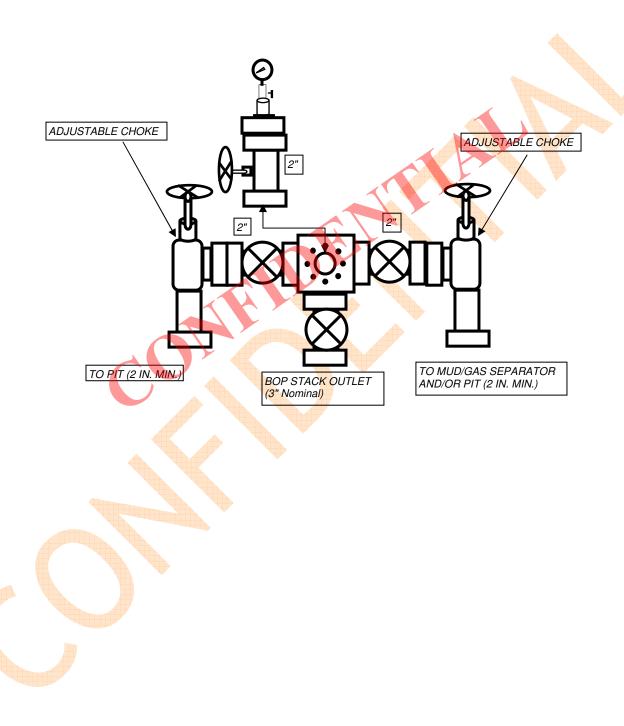
NINE POINT DRILLING PLAN
PETROGLYPH OPERATING COMPANY, INC
UTE TRIBAL 12-03-E4
NE NW, SEC 12, T5S, R4W
DUCHESNE COUNTY, UTAH

# TYPICAL 2,000 p.s.i. BLOWOUT PREVENTER

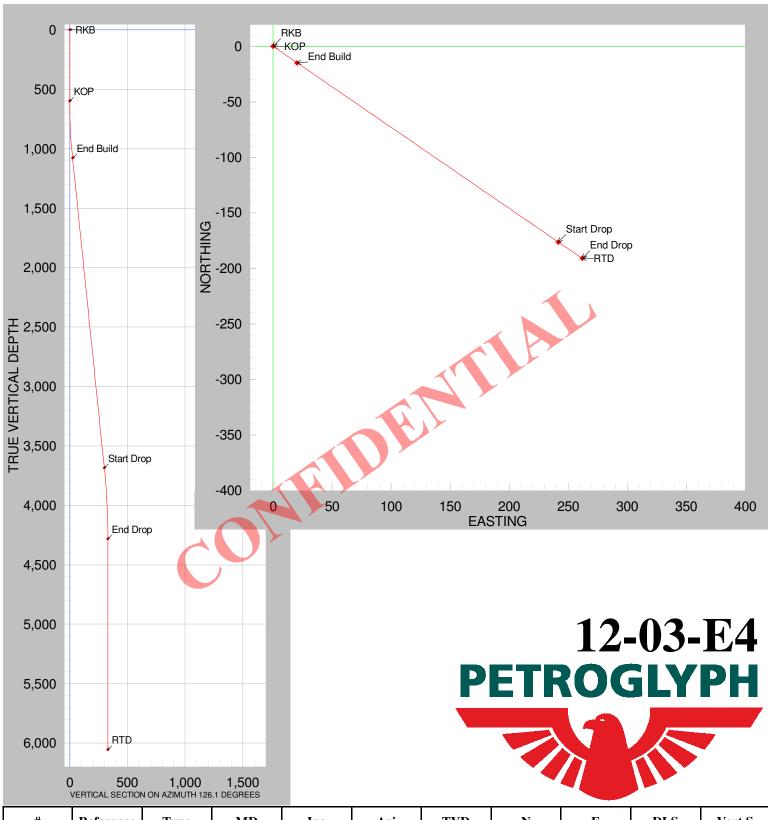


# **CONFIDENTIAL**

NINE POINT DRILLING PLAN
PETROGLYPH OPERATING COMPANY, INC
UTE TRIBAL 12-03-E4
NE NW, SEC 12, T5S, R4W
DUCHESNE COUNTY, UTAH
TYPICAL 2,000 p.s.i. CHOKE MANIFOLD



API Well Number: 43013518430000



#	Reference	Type	MD	Inc	Azi	TVD	N	E	DLS	Vert S
0	RKB	Tie Point	0.00	0.00	0.00	0.00	0.00	0.00		0.00
1	КОР	Vertical	600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00
2	End Build	Build	1080.00	6.00	126.10	1079.12	-14.79	20.29	1.25	25.11
3	Start Drop	Tangent	3700.00	6.00	126.10	3684.77	-176.15	241.57	0.00	298.97
4	End Drop	Drop	4300.00	0.00	0.00	4283.67	-194.65	266.93	1.00	330.36
5	RTD	Vertical	6073.00	0.00	0.00	6056.67	-194.65	266.93	0.00	330.36

RECEIVED: November 02, 2012

SES - Stoner Engineering Software

12-03-E4, Plan 1										
	D					riali				
Operator Field	Petroglyph				feet, %100ft Duchesne			1 Tuesday, October ical Section Azimuth		of 4
Well Name Plan				State Country			Survey	/ Calculation Method Database		•
Locatio		1718' F\	VL 12-5s-4w	Country		MapZon		Lat Long		
Si		- 17 10 1 V	VL 12 33 4W			Surface		Surface L		
Slot Nam			UWI			Surface	Y	Surface	e Lat	
Well Number			API			Z Datur Surface		Ground L	evel	
DIRECTIONA		AN				- Curiuse !	<u>-</u>	Ground E		
MD*	INC*	AZI*	TVD*	N*	E*	DLS*	V. S.*	MapE*	MapN* SysT	VD*
ft	deg	deg	ft	ft	_ ft	%100ft	ft	ft	ft	ft
*** RKB (at	t MD = 0.00	0)								
0.00	0.00	0.0	0.00	0.00	0.00		0.00			
50.00	0.00	0.0	50.00	0.00	0.00	0.00	0.00			
100.00	0.00	0.0	100.00	0.00	0.00	0.00	0.00			
150.00	0.00	0.0	150.00	0.00	0.00	0.00	0.00			
200.00	0.00	0.0	200.00	0.00	0.00	0.00	0.00			
250.00	0.00	0.0	250.00	0.00	0.00	0.00	0.00			
300.00	0.00	0.0	300.00	0.00	0.00	0.00	0.00			
350.00	0.00	0.0	350.00	0.00	0.00	0.00	0.00			
400.00	0.00	0.0	400.00	0.00	0.00	0.00	0.00			
450.00	0.00	0.0	450.00	0.00	0.00	0.00	0.00			
500.00	0.00	0.0	500.00	0.00	0.00	0.00	0.00			
550.00	0.00	0.0	550.00	0.00	0.00	0.00	0.00			
*** KOP (at										
600.00	0.00	0.0	600.00	0.00	0.00	0.00	0.00			
650.00	0.63	126.1	650.00	-0.16	0.22	1.25	0.27			
700.00	1.25	126.1	699.99	-0.64	0.88	1.25	1.09			
750.00	1.88	126.1	749.97	-1.45	1.98	1.25	2.45			
800.00	2.50	126.1	799.94	-2.57	3.53	1.25	4.36			
850.00	3.13	126.1	849.88	-4.02	5.51	1.25	6.82			
900.00	3.75	126.1	899.79	-5.78	7.93	1.25	9.81			
950.00	4.38	126.1	949.66	-7.87	10.79	1.25	13.36			
1000.00	5.00	126.1	999.49	-10.28	14.09	1.25	17.44			
1050.00	5.63	126.1	1049.28	-13.00	17.83	1.25	22.07			
*** END BU										
1080.00	6.00	126.1	1079.12	-14.79	20.29	1.25	25.11			
1100.00	6.00	126.1	1099.01	-16.03	21.98	0.00	27.20			
1150.00	6.00	126.1	1148.74	-19.11	26.20	0.00	32.43			
1200.00	6.00	126.1	1198.47	-22.19	30.42	0.00	37.65			
1250.00	6.00	126.1	1248.19	-25.26	34.65	0.00	42.88			
1300.00	6.00	126.1	1297.92	-28.34	38.87	0.00	48.11			
1350.00	6.00	126.1	1347.64	-31.42	43.09	0.00	53.33			
1400.00	6.00	126.1	1397.37	-34.50	47.32	0.00	58.56			
1450.00	6.00	126.1	1447.10	-37.58	51.54	0.00	63.79			
1500.00	6.00	126.1	1496.82	-40.66	55.76	0.00	69.01			
1550.00	6.00	126.1	1546.55	-43.74	59.98	0.00	74.24			

SES - Stoner Engineering Software

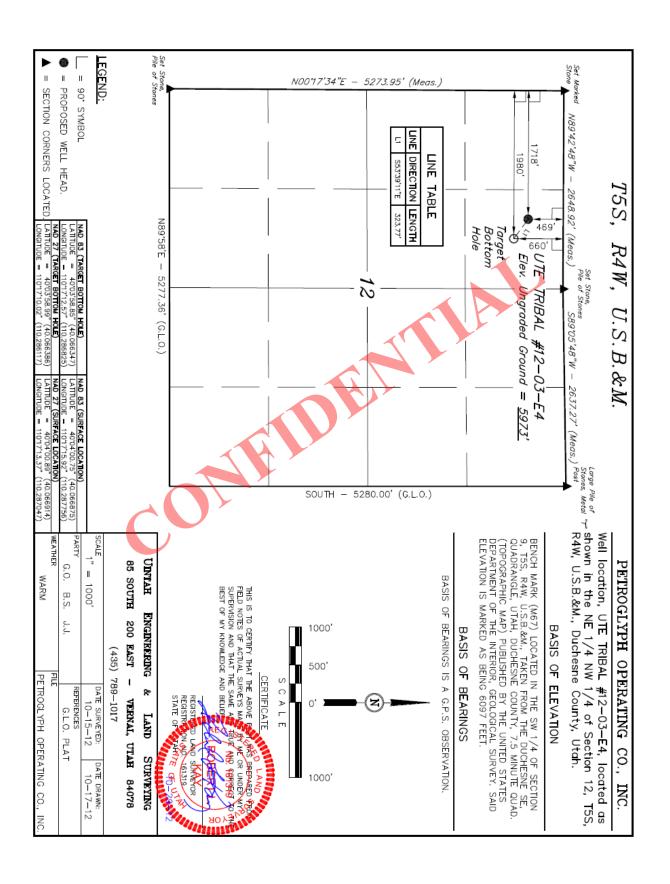
				12	2-03-E4	, Plan	1			
Operator Field Well Name Plan				Units	feet, %100ft Duchesne UT	<u> </u>	12:3 <b>Vert</b>	1 Tuesday, October ical Section Azimuth Calculation Method Database	126.1 Minimum Curvat	
Locatio Si		L 1718' F\	NL 12-5s-4w			MapZor Surface		Lat Long Surface l	_	
Slot Nam			UWI			Surface	eΥ	Surfac	e Lat	
Well Numb			API			Z Datu				
Proje		•••				Surface	<u>Z</u>	Ground I	Level	
DIRECTION				B. 8-1-						
MD*	INC*	AZI*	TVD*	N*	E*	DLS*	V. S.*	MapE*	MapN* Sys	
ft	deg	deg	ft	ft	ft	%100ft	ft	ft	ft	ft
1600.00 1650.00	6.00 6.00	126.1 126.1	1596.27 1646.00	-46.82 -49.90	64.21 68.43	0.00 0.00	79.46 84.69			
1030.00	0.00	120.1	1040.00	-43.30	00.40	0.00	04.03			
1700.00	6.00	126.1	1695.73	-52.98	72.65	0.00	89.92			
1750.00	6.00	126.1	1745.45	-56.06	76.88	0.00	95.14			
1800.00	6.00	126.1	1795.18	-59.14	81.10	0.00	100.37			
1850.00	6.00	126.1	1844.91	-62.22	85.32	0.00	105.60			
1900.00	6.00	126.1	1894.63	-65.30	89.54	0.00	110.82			
1950.00	6.00	126.1	1944.36	-68.38	93.77	0.00	116.05			
2000.00	6.00	126.1	1994.08	-71.46	97.99	0.00	121.28			
2050.00	6.00	126.1	2043.81	-74.53	102.21	0.00	126.50			
2100.00	6.00	126.1	2093.54	-77.61		0.00	131.73			
2150.00	6.00	126.1	2143.26	-80.69	110.66	0.00	136.96			
2200.00	6.00	126.1	2192.99	-83.77	114.88	0.00	142.18			
2250.00	6.00	126.1	2242.71	-86.85	119.10	0.00	147.41			
2300.00	6.00	126.1	2292.44	-89.93	123.33	0.00	152.63			
2350.00	6.00	126.1	2342.17	-93.01	127.55	0.00	157.86			
2400.00	6.00	126.1	2391.89	-96.09	131.77	0.00	163.09			
2450.00	6.00	126.1	2441.62	-99.17	136.00	0.00	168.31			
2500.00	6.00	126.1	2491.34	-102.25	140.22	0.00	173.54			
2550.00	6.00	126.1	2541.07	-105.33	144.44	0.00	178.77			
2600.00	6.00	126.1	2590.80	-108.41	148.66	0.00	183.99			
2650.00	6.00	126.1	2640.52	-111.49	152.89	0.00	189.22			
2700.00	6.00	126.1	2690.25	-114.57	157.11	0.00	194.45			
2750.00	6.00	126.1	2739.97	-117.65	161.33	0.00	199.67			
2800.00	6.00	126.1	2789.70	-120.73	165.56	0.00	204.90			
2850.00	6.00	126.1	2839.43	-123.81	169.78	0.00	210.13			
2900.00	6.00	126.1	2889.15	-126.88	174.00	0.00	215.35			
2950.00	6.00	126.1	2938.88	-129.96	178.22	0.00	220.58			
3000.00	6.00	126.1	2988.61	-133.04	182.45	0.00	225.80			
3050.00	6.00	126.1	3038.33	-136.12	186.67	0.00	231.03			
3100.00	6.00	126.1	3088.06	-139.20	190.89	0.00	236.26			
3150.00	6.00	126.1	3137.78	-142.28	195.12	0.00	241.48			
3200.00	6.00	126.1	3187.51	-145.36	199.34	0.00	246.71			
3250.00	6.00	126.1	3237.24	-148.44	203.56	0.00	251.94			
3300.00	6.00	126.1	3286.96	-151.52	207.79	0.00	257.16			

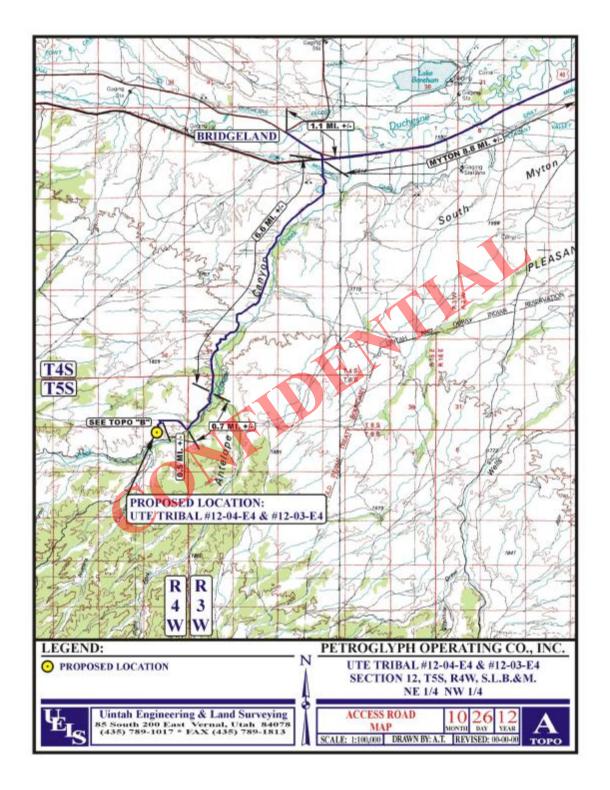
SES - Stoner Engineering Software

Operator   Petrophyph   Field   Fiel						2-03-E4,					
Pian 1   Country USA   MapZone SurfaceX   SurfaceX   Surface	Field				Units County	feet, %100ft Duchesne	,	12:3 <b>Vert</b>	ical Section Azimuth	126.1	
Site   Siot Name   Well Number   Project   P								Surve			116
Slot Name   Very Number   Project   Very Surface			L 1718' FV	VL 12-5s-4w					_		
Note				1114/1						_	
No.									Surrace	Lat	
MD*   INC*   AZI*   TVD*   N*   E*   DLS*   V. S.*   MapE*   MapN* SysTVI				7					Ground L	evel	
ft         deg         deg         ft         f	DIRECTION	AL WELL PI	_AN								
3350.00 6.00 126.1 3336.69 -154.60 212.01 0.00 262.39 3400.00 6.00 126.1 3386.41 -157.68 216.23 0.00 267.62  3450.00 6.00 126.1 3386.41 -157.68 216.23 0.00 276.02  3450.00 6.00 126.1 3486.87 -163.84 224.68 0.00 278.07 3550.00 6.00 126.1 3535.59 -166.92 228.90 0.00 283.30 3600.00 6.00 126.1 3585.32 -170.00 233.12 0.00 288.52 3650.00 6.00 126.1 3685.00 -170.00 233.12 0.00 288.52 3650.00 6.00 126.1 3684.77 -178.15 241.57 0.00 293.75  **** START DROP (at MD = 3700.00) 3700.00 6.00 126.1 3684.77 -178.15 241.57 0.00 298.97 3750.00 5.50 126.1 3734.52 -179.11 245.62 1.00 303.98 3800.00 5.00 126.1 3834.14 184.24 252.66 1.00 312.70 3900.00 4.00 126.1 3884.10 -186.42 255.65 1.00 316.40  3950.00 3.50 126.1 3938.89 -188.35 258.29 1.00 319.67 4000.00 3.00 126.1 4033.75 -191.43 262.52 1.00 322.51 4050.00 2.50 126.1 4033.75 -191.43 262.52 1.00 324.91 4100.00 2.00 126.1 4183.68 -194.59 265.93 1.00 329.49 4250.00 1.50 126.1 4183.68 -194.52 266.75 1.00 330.36 4350.00 0.00 0.00 4283.67 -194.65 266.93 0.00 330.36 4400.00 0.00 0.00 4833.67 -194.65 266.93 0.00 330.36 4450.00 0.00 0.00 4433.67 -194.65 266.93 0.00 330.36 450.00 0.00 0.00 4833.67 -194.65 266.93 0.00 330.36 450.00 0.00 0.00 4683.67 -194.65 266.93 0.00 330.36 450.00 0.00 0.00 4683.67 -194.65 266.93 0.00 330.36 450.00 0.00 0.00 4833.67 -194.65 266.93 0.00 330.36 450.00 0.00 0.00 4833.67 -194.65 266.93 0.00 330.36 450.00 0.00 0.00 4833.67 -194.65 266.93 0.00 330.36 450.00 0.00 0.00 4833.67 -194.65 266.93 0.00 330.36 450.00 0.00 0.00 4833.67 -194.65 266.93 0.00 330.36 450.00 0.00 0.00 4833.67 -194.65 266.93 0.00 330.36 450.00 0.00 0.00 4833.67 -194.65 266.93 0.00 330.36 450.00 0.00 0.00 4683.67 -194.65 266.93 0.00 330.36 450.00 0.00 0.00 4683.67 -194.65 266.93 0.00 330.36 450.00 0.00 0.00 4833.67 -194.65 266.93 0.00 330.36 450.00 0.00 0.00 4833.67 -194.65 266.93 0.00 330.36 450.00 0.00 0.00 4633.67 -194.65 266.93 0.00 330.36 450.00 0.00 0.00 4433.67 -194.65 266.93 0.00 330.36	MD*	INC*	AZI*	TVD*	N*	<b>E</b> *	DLS*	V. S.*	MapE*	MapN* Sys	TVD*
3400.00 6.00 126.1 3386.41 -157.68 216.23 0.00 267.62  3450.00 6.00 126.1 3436.14 -160.76 220.45 0.00 272.84 3500.00 6.00 126.1 3485.87 -163.84 224.68 0.00 278.07 3550.00 6.00 126.1 3585.59 -166.92 228.90 0.00 283.30 3600.00 6.00 126.1 3585.59 -166.92 228.90 0.00 283.30 3600.00 6.00 126.1 3695.59 -170.00 233.12 0.00 288.52 3650.00 6.00 126.1 3695.04 -173.08 237.35 0.00 293.75  *** START DROP (at MD = 3700.00) 3700.00 6.00 126.1 3684.77 -176.15 241.57 0.00 298.97 3750.00 5.50 126.1 3784.52 179.14 245.62 1.00 303.98 3850.00 4.50 126.1 3834.14 181.80 249.31 1.00 308.56 3850.00 4.50 126.1 3884.00 -186.42 255.65 1.00 316.40 3950.00 3.50 126.1 3834.14 184.24 252.66 1.00 312.70 3900.00 4.00 126.1 3838.81 -190.02 260.58 1.00 322.51 4000.00 3.00 126.1 4033.75 -191.43 262.52 1.00 324.91 4100.00 2.00 126.1 4033.75 -191.43 262.52 1.00 324.91 4100.00 2.00 126.1 4033.75 -191.43 262.52 1.00 324.91 4150.00 1.50 126.1 4183.68 -194.52 266.75 1.00 330.36 4200.00 1.00 126.1 4233.68 -194.52 266.93 0.00 330.36 4350.00 0.00 0.00 4433.67 -194.65 266.93 0.00 330.36 4450.00 0.00 0.00 4433.67 -194.65 266.93 0.00 330.36 4450.00 0.00 0.00 4433.67 -194.65 266.93 0.00 330.36 450.00 0.00 0.00 4483.67 -194.65 266.93 0.00 330.36 450.00 0.00 0.00 4483.67 -194.65 266.93 0.00 330.36 450.00 0.00 0.00 4433.67 -194.65 266.93 0.00 330.36 450.00 0.00 0.00 4433.67 -194.65 266.93 0.00 330.36 450.00 0.00 0.00 4433.67 -194.65 266.93 0.00 330.36 450.00 0.00 0.00 4433.67 -194.65 266.93 0.00 330.36 450.00 0.00 0.00 4833.67 -194.65 266.93 0.00 330.36 450.00 0.00 0.00 4833.67 -194.65 266.93 0.00 330.36 450.00 0.00 0.00 4833.67 -194.65 266.93 0.00 330.36 450.00 0.00 0.00 4833.67 -194.65 266.93 0.00 330.36 450.00 0.00 0.00 4833.67 -194.65 266.93 0.00 330.36 450.00 0.00 0.00 4833.67 -194.65 266.93 0.00 330.36 450.00 0.00 0.00 4833.67 -194.65 266.93 0.00 330.36 450.00 0.00 0.00 4833.67 -194.65 266.93 0.00 330.36 450.00 0.00 0.00 4833.67 -194.65 266.93 0.00 330.36	ft	deg	deg	ft	ft	ft	%100ft	ft	ft	ft	ft
3450.00 6.00 126.1 3436.14 -160.76 220.45 0.00 272.84 3500.00 6.00 126.1 3485.87 -163.84 224.68 0.00 278.07 3550.00 6.00 126.1 3535.59 -166.92 228.90 -0.00 283.30 3600.00 6.00 126.1 3685.04 -173.08 237.55 0.00 288.52 3650.00 6.00 126.1 3685.04 -173.08 237.55 0.00 293.75  **** START DROP (at MD = 3700.00) 3700.00 6.00 126.1 3684.77 -176.16 241.57 0.00 298.97 3750.00 5.50 126.1 3734.52 179.14 245.62 1.00 303.98 3800.00 5.00 126.1 3784.31 181.80 249.31 1.00 308.56 3850.00 4.50 126.1 3834.14 184.24 252.66 1.00 312.70 3900.00 4.00 126.1 3884.00 -186.42 255.65 1.00 316.40 3950.00 3.50 126.1 3938.89 -188.35 258.29 1.00 319.67 4000.00 3.00 126.1 3983.81 -190.02 260.58 1.00 322.51 4050.00 2.50 126.1 4083.75 -191.43 262.52 1.00 324.91 4100.00 2.00 126.1 4083.75 -191.43 262.52 1.00 324.91 4100.00 2.00 126.1 4133.69 -193.49 265.34 1.00 328.40  4200.00 1.00 126.1 4183.68 -194.13 266.22 1.00 329.49 4250.00 0.50 126.1 4183.68 -194.13 266.22 1.00 330.36 4350.00 0.00 0.0 4333.67 -194.65 266.93 0.00 330.36 4450.00 0.00 0.00 4433.67 -194.65 266.93 0.00 330.36 450.00 0.00 0.00 4433.67 -194.65 266.93 0.00 330.36 450.00 0.00 0.00 4433.67 -194.65 266.93 0.00 330.36 450.00 0.00 0.00 4433.67 -194.65 266.93 0.00 330.36 450.00 0.00 0.00 4433.67 -194.65 266.93 0.00 330.36 450.00 0.00 0.00 4533.67 -194.65 266.93 0.00 330.36 450.00 0.00 0.00 4533.67 -194.65 266.93 0.00 330.36 450.00 0.00 0.00 4533.67 -194.65 266.93 0.00 330.36 450.00 0.00 0.00 4533.67 -194.65 266.93 0.00 330.36 450.00 0.00 0.00 4533.67 -194.65 266.93 0.00 330.36 450.00 0.00 0.00 4533.67 -194.65 266.93 0.00 330.36 450.00 0.00 0.00 4533.67 -194.65 266.93 0.00 330.36 450.00 0.00 0.00 4533.67 -194.65 266.93 0.00 330.36 450.00 0.00 0.00 4733.67 -194.65 266.93 0.00 330.36 450.00 0.00 0.00 4733.67 -194.65 266.93 0.00 330.36 450.00 0.00 0.00 4733.67 -194.65 266.93 0.00 330.36 450.00 0.00 0.00 4733.67 -194.65 266.93 0.00 330.36 450.00 0.00 0.00 4733.67 -194.65 266.93 0.00 330.36 450.00 0.00 0.00 4733.67 -194.65 266.93 0.00 330.36	3350.00										
3500.00 6.00 126.1 3485.87 -163.84 224.68 0.00 278.07 3550.00 6.00 126.1 3535.59 -166.92 228.90 0.00 283.30 3600.00 6.00 126.1 3635.32 -170.00 233.12 0.00 283.52 3650.00 6.00 126.1 3635.32 -170.00 233.12 0.00 283.52 3650.00 6.00 126.1 3635.04 -173.08 237.35 0.00 293.75  **** START DROP (at MD = 3700.00) 3700.00 6.00 126.1 3734.52 -176.15 241.67 0.00 298.97 3750.00 5.50 126.1 3734.52 -179.11 245.62 1.00 303.98 3800.00 5.00 126.1 3784.31 181.80 249.31 1.00 308.56 3850.00 4.50 126.1 3834.14 184.24 252.66 1.00 312.70 3900.00 4.00 126.1 3884.00 -186.42 255.65 1.00 312.70 3900.00 3.50 126.1 3938.38 -188.35 258.29 1.00 319.67 4000.00 3.50 126.1 4083.75 -191.43 262.52 1.00 324.91 4100.00 2.00 126.1 4083.75 -191.43 262.52 1.00 324.91 4100.00 2.00 126.1 4083.75 -191.43 262.52 1.00 328.40 4200.00 1.00 126.1 4183.68 -194.13 266.22 1.00 328.40 4200.00 1.00 126.1 4183.68 -194.13 266.22 1.00 339.49 4250.00 0.50 126.1 4433.67 -194.65 266.93 0.00 330.36 4400.00 0.00 0.0 4433.67 -194.65 266.93 0.00 330.36 4450.00 0.00 0.0 4433.67 -194.65 266.93 0.00 330.36 4500.00 0.00 0.0 4533.67 -194.65 266.93 0.00 330.36 4500.00 0.00 0.0 4533.67 -194.65 266.93 0.00 330.36 4500.00 0.00 0.0 4683.67 -194.65 266.93 0.00 330.36 4650.00 0.00 0.0 4633.67 -194.65 266.93 0.00 330.36 4600.00 0.00 0.0 4733.67 -194.65 266.93 0.00 330.36 4800.00 0.00 0.0 4733.67 -194.65 266.93 0.00 330.36 4800.00 0.00 0.0 4733.67 -194.65 266.93 0.00 330.36 4800.00 0.00 0.0 4733.67 -194.65 266.93 0.00 330.36 4800.00 0.00 0.0 4733.67 -194.65 266.93 0.00 330.36 4800.00 0.00 0.0 4733.67 -194.65 266.93 0.00 330.36 4800.00 0.00 0.0 4733.67 -194.65 266.93 0.00 330.36 4800.00 0.00 0.0 4733.67 -194.65 266.93 0.00 330.36 4800.00 0.00 0.0 4733.67 -194.65 266.93 0.00 330.36 4800.00 0.00 0.0 4733.67 -194.65 266.93 0.00 330.36 4800.00 0.00 0.0 4733.67 -194.65 266.93 0.00 330.36 4800.00 0.00 0.00 4733.67 -194.65 266.93 0.00 330.36	3400.00	6.00	126.1	3386.41	-157.68	216.23	0.00	267.62			
3500.00 6.00 126.1 3485.87 -163.84 224.68 0.00 278.07 3550.00 6.00 126.1 3535.59 -166.92 228.90 0.00 283.30 3600.00 6.00 126.1 3635.32 -170.00 233.12 0.00 283.52 3650.00 6.00 126.1 3635.32 -170.00 233.12 0.00 283.52 3650.00 6.00 126.1 3635.04 -173.08 237.35 0.00 293.75  **** START DROP (at MD = 3700.00) 3700.00 6.00 126.1 3734.52 -176.15 241.67 0.00 298.97 3750.00 5.50 126.1 3734.52 -179.11 245.62 1.00 303.98 3800.00 5.00 126.1 3784.31 181.80 249.31 1.00 308.56 3850.00 4.50 126.1 3834.14 184.24 252.66 1.00 312.70 3900.00 4.00 126.1 3884.00 -186.42 255.65 1.00 312.70 3900.00 3.50 126.1 3938.38 -188.35 258.29 1.00 319.67 4000.00 3.50 126.1 4083.75 -191.43 262.52 1.00 324.91 4100.00 2.00 126.1 4083.75 -191.43 262.52 1.00 324.91 4100.00 2.00 126.1 4083.75 -191.43 262.52 1.00 328.40 4200.00 1.00 126.1 4183.68 -194.13 266.22 1.00 328.40 4200.00 1.00 126.1 4183.68 -194.13 266.22 1.00 339.49 4250.00 0.50 126.1 4433.67 -194.65 266.93 0.00 330.36 4400.00 0.00 0.0 4433.67 -194.65 266.93 0.00 330.36 4450.00 0.00 0.0 4433.67 -194.65 266.93 0.00 330.36 4500.00 0.00 0.0 4533.67 -194.65 266.93 0.00 330.36 4500.00 0.00 0.0 4533.67 -194.65 266.93 0.00 330.36 4500.00 0.00 0.0 4683.67 -194.65 266.93 0.00 330.36 4650.00 0.00 0.0 4633.67 -194.65 266.93 0.00 330.36 4600.00 0.00 0.0 4733.67 -194.65 266.93 0.00 330.36 4800.00 0.00 0.0 4733.67 -194.65 266.93 0.00 330.36 4800.00 0.00 0.0 4733.67 -194.65 266.93 0.00 330.36 4800.00 0.00 0.0 4733.67 -194.65 266.93 0.00 330.36 4800.00 0.00 0.0 4733.67 -194.65 266.93 0.00 330.36 4800.00 0.00 0.0 4733.67 -194.65 266.93 0.00 330.36 4800.00 0.00 0.0 4733.67 -194.65 266.93 0.00 330.36 4800.00 0.00 0.0 4733.67 -194.65 266.93 0.00 330.36 4800.00 0.00 0.0 4733.67 -194.65 266.93 0.00 330.36 4800.00 0.00 0.0 4733.67 -194.65 266.93 0.00 330.36 4800.00 0.00 0.0 4733.67 -194.65 266.93 0.00 330.36 4800.00 0.00 0.00 4733.67 -194.65 266.93 0.00 330.36	3450.00	6.00	126.1	3436.14	-160.76	220.45	0.00	272.84			
3550.00 6.00 126.1 3535.59 -166.92 228.90 0.00 283.30 3600.00 6.00 126.1 3585.32 -170.00 233.12 0.00 288.52 3650.00 6.00 126.1 3635.04 -173.08 237.35 0.00 293.75   **** START DROP (at MD = 3700.00) 3700.00 6.00 126.1 3684.77 -176.15 241.67 0.00 298.97 3750.00 5.50 126.1 3734.52 179.11 245.62 1.00 303.98 3800.00 5.00 126.1 3784.31 181.80 249.31 1.00 308.56 3850.00 4.50 126.1 3834.14 184.24 252.66 1.00 312.70 3900.00 4.00 126.1 3884.00 -186.42 255.65 1.00 316.40 3950.00 3.50 126.1 3934.14 184.24 255.65 1.00 316.40 3950.00 3.50 126.1 3834.14 181.80 249.31 1.00 308.56 400.00 2.50 126.1 3884.00 -186.42 255.65 1.00 316.40 3950.00 3.50 126.1 3884.00 -186.42 255.65 1.00 316.40 3950.00 3.50 126.1 3884.00 -186.42 255.65 1.00 322.51 4050.00 2.50 126.1 4033.75 -191.43 262.52 1.00 324.91 4100.00 2.00 126.1 4033.72 -192.59 264.11 1.00 326.87 4150.00 1.50 126.1 4133.69 -193.49 265.34 1.00 328.40 4200.00 1.00 126.1 4133.69 -193.49 265.34 1.00 328.40 4200.00 0.00 1.00 126.1 4133.69 -193.49 265.34 1.00 329.49 4250.00 0.50 126.1 4233.68 -194.52 266.75 1.00 330.36 4350.00 0.00 0.00 4333.67 -194.65 266.93 0.00 330.36 4400.00 0.00 0.00 4333.67 -194.65 266.93 0.00 330.36 4400.00 0.00 0.00 4433.67 -194.65 266.93 0.00 330.36 4550.00 0.00 0.00 4583.67 -194.65 266.93 0.00 330.36 4600.00 0.00 0.00 4633.67 -194.65 266.93 0.00 330.36 4600.00 0.00 0.00 4583.67 -194.65 266.93 0.00 330.36 4600.00 0.00 0.00 4583.67 -194.65 266.93 0.00 330.36 4600.00 0.00 0.00 4633.67 -194.65 266.93 0.00 330.36 4600.00 0.00 0.00 4733.67 -194.65 266.93 0.00 330.36 4600.00 0.00 0.00 4733.67 -194.65 266.93 0.00 330.36 4600.00 0.00 0.00 4733.67 -194.65 266.93 0.00 330.36 4600.00 0.00 0.00 4733.67 -194.65 266.93 0.00 330.36 4600.00 0.00 0.00 4733.67 -194.65 266.93 0.00 330.36 4600.00 0.00 0.00 4733.67 -194.65 266.93 0.00 330.36 4600.00 0.00 0.00 4733.67 -194.65 266.93 0.00 330.36 4600.00 0.00 0.00 4733.67 -194.65 266.93 0.00 330.36 4600.00 0.00 0.00 4733.67 -194.65 266.93 0.00 330.36 4600.00 0.00 0.00 4733.67 -194.65 266.93 0.00 330.36 4600.00 0.00 0.00 4733.67 -194.											
*** START DROP (at MD = 3700.00)  *** START DROP (at MD = 3700.00)  3700.00 6.00 126.1 3684.77 -176.16 241.57 0.00 298.97  3750.00 5.50 126.1 3734.52 -179.11 245.62 1.00 303.98  3800.00 5.00 126.1 3784.31 181.80 249.31 1.00 308.56  3850.00 4.50 126.1 3834.14 -184.24 252.66 1.00 312.70  3900.00 4.00 126.1 3884.00 -186.42 255.65 1.00 316.40  3950.00 3.50 126.1 3933.89 -188.35 258.29 1.00 316.40  3950.00 3.00 126.1 4033.75 -191.43 262.52 1.00 322.51  4000.00 2.50 126.1 4033.75 -191.43 262.52 1.00 324.91  4100.00 2.00 126.1 4133.69 -193.49 265.34 1.00 328.40  4200.00 1.00 126.1 4133.69 -194.13 266.22 1.00 329.49  4250.00 0.50 126.1 4233.68 -194.52 266.75 1.00 330.36  4350.00 0.00 0.00 4333.67 -194.65 266.93 0.00 330.36  4450.00 0.00 0.00 4433.67 -194.65 266.93 0.00 330.36  4500.00 0.00 0.00 4433.67 -194.65 266.93 0.00 330.36  4500.00 0.00 0.00 4533.67 -194.65 266.93 0.00 330.36  4500.00 0.00 0.00 4633.67 -194.65 266.93 0.00 330.36  4500.00 0.00 0.00 4433.67 -194.65 266.93 0.00 330.36  4500.00 0.00 0.00 4533.67 -194.65 266.93 0.00 330.36  4500.00 0.00 0.00 4533.67 -194.65 266.93 0.00 330.36  4500.00 0.00 0.00 4533.67 -194.65 266.93 0.00 330.36  4500.00 0.00 0.00 4533.67 -194.65 266.93 0.00 330.36  4500.00 0.00 0.00 4733.67 -194.65 266.93 0.00 330.36  4500.00 0.00 0.00 4633.67 -194.65 266.93 0.00 330.36  4500.00 0.00 0.00 473.67 -194.65 266.93 0.00 330.36  4500.00 0.00 0.00 4733.67 -194.65 266.93 0.00 330.36  4500.00 0.00 0.00 4733.67 -194.65 266.93 0.00 330.36  4500.00 0.00 0.00 4733.67 -194.65 266.93 0.00 330.36  4500.00 0.00 0.00 4733.67 -194.65 266.93 0.00 330.36  4500.00 0.00 0.00 4733.67 -194.65 266.93 0.00 330.36  4500.00 0.00 0.00 4733.67 -194.65 266.93 0.00 330.36  4500.00 0.00 0.00 4733.67 -194.65 266.93 0.00 330.36  4500.00 0.00 0.00 4733.67 -194.65 266.93 0.00 330.36  4500.00 0.00 0.00 4733.67 -194.65 266.93 0.00 330.36  4500.00 0.00 0.00 4733.67 -194.65 266.93 0.00 330.36	3550.00	6.00	126.1	3535.59	-166.92	228.90	0.00	283.30			
**** START DROP (at MD = 3700.00) 3700.00 6.00 126.1 3684.77 -176.16 241.67 0.00 298.97 3750.00 5.50 126.1 3734.52 -179.11 245.62 1.00 303.98 3800.00 5.00 126.1 3784.31 181.80 249.31 1.00 308.56 3850.00 4.50 126.1 3834.14 184.24 252.66 1.00 312.70 3900.00 4.00 126.1 3834.00 -186.42 255.65 1.00 316.40  3950.00 3.50 126.1 3933.89 -188.35 258.29 1.00 316.40  3950.00 3.50 126.1 4033.75 -191.43 262.52 1.00 322.51 4050.00 2.50 126.1 4033.75 -191.43 262.52 1.00 324.91 4100.00 2.00 126.1 4083.72 -192.59 264.11 1.00 326.87 4150.00 1.50 126.1 4133.68 -194.13 266.22 1.00 328.40  4200.00 1.00 126.1 4138.68 -194.13 266.22 1.00 329.49 4250.00 0.50 126.1 4233.68 -194.52 266.75 1.00 330.14  *** END DROP (at MD = 4300.00) 4300.00 0.00 0.0 4283.67 -194.65 266.93 1.00 330.36 4350.00 0.00 0.0 4333.67 -194.65 266.93 0.00 330.36 4450.00 0.00 0.0 4433.67 -194.65 266.93 0.00 330.36 4550.00 0.00 0.0 4433.67 -194.65 266.93 0.00 330.36 4550.00 0.00 0.0 4433.67 -194.65 266.93 0.00 330.36 4550.00 0.00 0.0 4433.67 -194.65 266.93 0.00 330.36 4550.00 0.00 0.0 4433.67 -194.65 266.93 0.00 330.36 4550.00 0.00 0.0 4433.67 -194.65 266.93 0.00 330.36 4600.00 0.00 0.0 4633.67 -194.65 266.93 0.00 330.36 4750.00 0.00 0.0 473.67 -194.65 266.93 0.00 330.36 4750.00 0.00 0.0 483.67 -194.65 266.93 0.00 330.36 4750.00 0.00 0.0 473.67 -194.65 266.93 0.00 330.36 4750.00 0.00 0.0 473.67 -194.65 266.93 0.00 330.36 4750.00 0.00 0.0 4783.67 -194.65 266.93 0.00 330.36 4750.00 0.00 0.0 4783.67 -194.65 266.93 0.00 330.36 4750.00 0.00 0.0 4783.67 -194.65 266.93 0.00 330.36 4750.00 0.00 0.0 4783.67 -194.65 266.93 0.00 330.36 4750.00 0.00 0.0 4783.67 -194.65 266.93 0.00 330.36 4750.00 0.00 0.0 4783.67 -194.65 266.93 0.00 330.36 4750.00 0.00 0.00 4783.67 -194.65 266.93 0.00 330.36	3600.00	6.00	126.1	3585.32	-170.00	233.12	0.00	288.52			
3700.00 6.00 126.1 3684.77 -176.15 24).57 0.00 298.97 3750.00 5.50 126.1 3734.52 179.11 245.62 1.00 303.98 3800.00 5.00 126.1 3784.31 181.80 249.31 1.00 308.56 3850.00 4.50 126.1 3834.14 184.24 252.66 1.00 312.70 3900.00 4.00 126.1 3884.00 -186.42 255.65 1.00 316.40  3950.00 3.50 126.1 3933.89 -188.35 258.29 1.00 316.40  3950.00 3.00 126.1 3983.81 -190.02 260.58 1.00 322.51 4050.00 2.50 126.1 4033.75 -191.43 262.52 1.00 324.91 4100.00 2.00 126.1 4033.72 -192.59 264.11 1.00 326.87 4150.00 1.50 126.1 4133.69 -193.49 265.34 1.00 328.40  4200.00 1.00 126.1 4183.68 -194.52 266.75 1.00 330.14  *** END DROP (at MD = 4300.00)  4300.00 0.00 0.0 4283.67 -194.65 266.93 1.00 330.36 4350.00 0.00 0.0 4383.67 -194.65 266.93 0.00 330.36 4450.00 0.00 0.0 4483.67 -194.65 266.93 0.00 330.36 4550.00 0.00 0.0 4483.67 -194.65 266.93 0.00 330.36 4550.00 0.00 0.0 4483.67 -194.65 266.93 0.00 330.36 4550.00 0.00 0.0 4483.67 -194.65 266.93 0.00 330.36 4550.00 0.00 0.0 4483.67 -194.65 266.93 0.00 330.36 4550.00 0.00 0.0 4483.67 -194.65 266.93 0.00 330.36 4500.00 0.00 0.0 4483.67 -194.65 266.93 0.00 330.36 4500.00 0.00 0.0 4483.67 -194.65 266.93 0.00 330.36 4550.00 0.00 0.0 4483.67 -194.65 266.93 0.00 330.36 4500.00 0.00 0.0 4483.67 -194.65 266.93 0.00 330.36 4500.00 0.00 0.0 4483.67 -194.65 266.93 0.00 330.36 4500.00 0.00 0.0 4483.67 -194.65 266.93 0.00 330.36 4500.00 0.00 0.0 4583.67 -194.65 266.93 0.00 330.36 4500.00 0.00 0.0 4483.67 -194.65 266.93 0.00 330.36 4500.00 0.00 0.0 4583.67 -194.65 266.93 0.00 330.36 4500.00 0.00 0.0 4783.67 -194.65 266.93 0.00 330.36 4500.00 0.00 0.0 4783.67 -194.65 266.93 0.00 330.36 4500.00 0.00 0.0 4783.67 -194.65 266.93 0.00 330.36 4500.00 0.00 0.00 4783.67 -194.65 266.93 0.00 330.36 4500.00 0.00 0.00 4783.67 -194.65 266.93 0.00 330.36 4500.00 0.00 0.00 4783.67 -194.65 266.93 0.00 330.36 4500.00 0.00 0.00 4783.67 -194.65 266.93 0.00 330.36	3650.00	6.00	126.1	3635.04	-173.08	237.35	0.00	293.75			
3700.00 6.00 126.1 3684.77 -176.15 24).57 0.00 298.97 3750.00 5.50 126.1 3734.52 179.11 245.62 1.00 303.98 3800.00 5.00 126.1 3784.31 181.80 249.31 1.00 308.56 3850.00 4.50 126.1 3834.14 184.24 252.66 1.00 312.70 3900.00 4.00 126.1 3884.00 -186.42 255.65 1.00 316.40  3950.00 3.50 126.1 3933.89 -188.35 258.29 1.00 316.40  3950.00 3.00 126.1 3983.81 -190.02 260.58 1.00 322.51 4050.00 2.50 126.1 4033.75 -191.43 262.52 1.00 324.91 4100.00 2.00 126.1 4033.72 -192.59 264.11 1.00 326.87 4150.00 1.50 126.1 4133.69 -193.49 265.34 1.00 328.40  4200.00 1.00 126.1 4183.68 -194.52 266.75 1.00 330.14  *** END DROP (at MD = 4300.00)  4300.00 0.00 0.0 4283.67 -194.65 266.93 1.00 330.36 4350.00 0.00 0.0 4383.67 -194.65 266.93 0.00 330.36 4450.00 0.00 0.0 4483.67 -194.65 266.93 0.00 330.36 4550.00 0.00 0.0 4483.67 -194.65 266.93 0.00 330.36 4550.00 0.00 0.0 4483.67 -194.65 266.93 0.00 330.36 4550.00 0.00 0.0 4483.67 -194.65 266.93 0.00 330.36 4550.00 0.00 0.0 4483.67 -194.65 266.93 0.00 330.36 4550.00 0.00 0.0 4483.67 -194.65 266.93 0.00 330.36 4500.00 0.00 0.0 4483.67 -194.65 266.93 0.00 330.36 4500.00 0.00 0.0 4483.67 -194.65 266.93 0.00 330.36 4550.00 0.00 0.0 4483.67 -194.65 266.93 0.00 330.36 4500.00 0.00 0.0 4483.67 -194.65 266.93 0.00 330.36 4500.00 0.00 0.0 4483.67 -194.65 266.93 0.00 330.36 4500.00 0.00 0.0 4483.67 -194.65 266.93 0.00 330.36 4500.00 0.00 0.0 4583.67 -194.65 266.93 0.00 330.36 4500.00 0.00 0.0 4483.67 -194.65 266.93 0.00 330.36 4500.00 0.00 0.0 4583.67 -194.65 266.93 0.00 330.36 4500.00 0.00 0.0 4783.67 -194.65 266.93 0.00 330.36 4500.00 0.00 0.0 4783.67 -194.65 266.93 0.00 330.36 4500.00 0.00 0.0 4783.67 -194.65 266.93 0.00 330.36 4500.00 0.00 0.00 4783.67 -194.65 266.93 0.00 330.36 4500.00 0.00 0.00 4783.67 -194.65 266.93 0.00 330.36 4500.00 0.00 0.00 4783.67 -194.65 266.93 0.00 330.36 4500.00 0.00 0.00 4783.67 -194.65 266.93 0.00 330.36	*** <b>CTADT</b> F		1D = 370	10 00)							
3750.00 5.50 126.1 3734.52 -179.11 245.62 1.00 303.98 3800.00 5.00 126.1 3784.31 181.80 249.31 1.00 308.56 3850.00 4.50 126.1 3834.14 184.24 252.66 1.00 312.70 3900.00 4.00 126.1 3884.00 -186.42 255.65 1.00 316.40  3950.00 3.50 126.1 3983.89 -188.35 258.29 1.00 319.67 4000.00 3.00 126.1 4033.75 -191.43 262.52 1.00 322.51 4050.00 2.50 126.1 4033.75 -191.43 262.52 1.00 324.91 4100.00 2.00 126.1 4083.72 -192.59 264.11 1.00 326.87 4150.00 1.50 126.1 4133.69 -193.49 265.34 1.00 328.40  4200.00 1.00 126.1 4183.68 -194.13 266.22 1.00 329.49 4250.00 0.50 126.1 4233.68 -194.52 266.75 1.00 330.14  **** END DROP (at MD = 4300.00) 4300.00 0.00 4283.67 -194.65 266.93 1.00 330.36 4450.00 0.00 0.0 4433.67 -194.65 266.93 0.00 330.36 4450.00 0.00 0.0 4433.67 -194.65 266.93 0.00 330.36 4550.00 0.00 0.0 4483.67 -194.65 266.93 0.00 330.36 4550.00 0.00 0.0 4533.67 -194.65 266.93 0.00 330.36 4600.00 0.00 0.0 4533.67 -194.65 266.93 0.00 330.36 4600.00 0.00 0.0 4533.67 -194.65 266.93 0.00 330.36 4600.00 0.00 0.0 4533.67 -194.65 266.93 0.00 330.36 4600.00 0.00 0.0 4633.67 -194.65 266.93 0.00 330.36 4600.00 0.00 0.0 4783.67 -194.65 266.93 0.00 330.36 4650.00 0.00 0.0 4783.67 -194.65 266.93 0.00 330.36 4750.00 0.00 0.0 4783.67 -194.65 266.93 0.00 330.36 4850.00 0.00 0.00 4783.67 -194.65 266.93 0.00 330.36 4850.00 0.00 0.00 4783.67 -194.65 266.93 0.00 330.36 4850.00 0.00 0.00 4783.67 -194.65 266.93 0.00 330.36 4850.00 0.00 0.00 4783.67 -194.65 266.93 0.00 330.36 4850.00 0.00 0.00 4783.67 -194.65 266.93 0.00 330.36 4850.00 0.00 0.00 4783.67 -194.65 266.93 0.00 330.36 4850.00 0.00 0.00 4783.67 -194.65 266.93 0.00 330.36 4850.00 0.00 0.00 4783.67 -194.65 266.93 0.00 330.36					-176 15	241.57	0.00	298 97			
3800.00 5.00 126.1 3784.31 -181.80 249.31 1.00 308.56 3850.00 4.50 126.1 3834.14 -184.24 252.66 1.00 312.70 3900.00 4.00 126.1 3884.00 -186.42 255.65 1.00 316.40  3950.00 3.50 126.1 3933.89 -188.35 258.29 1.00 319.67 4000.00 3.00 126.1 3983.81 -190.02 260.58 1.00 322.51 4050.00 2.50 126.1 4033.75 -191.43 262.52 1.00 324.91 4100.00 2.00 126.1 4083.72 -192.59 264.11 1.00 326.87 4150.00 1.50 126.1 4133.69 -193.49 265.34 1.00 328.40  4200.00 1.00 126.1 4183.68 -194.13 266.22 1.00 329.49 4250.00 0.50 126.1 4233.68 -194.52 266.75 1.00 330.14  ***END DROP (at MD = 4300.00) 4300.00 0.00 0.0 4333.67 -194.65 266.93 0.00 330.36 4450.00 0.00 0.0 4333.67 -194.65 266.93 0.00 330.36 4450.00 0.00 0.0 4433.67 -194.65 266.93 0.00 330.36 4550.00 0.00 0.0 4533.67 -194.65 266.93 0.00 330.36 4550.00 0.00 0.0 4533.67 -194.65 266.93 0.00 330.36 4600.00 0.00 0.0 4633.67 -194.65 266.93 0.00 330.36 4600.00 0.00 0.0 4633.67 -194.65 266.93 0.00 330.36 4750.00 0.00 0.0 4833.67 -194.65 266.93 0.00 330.36 4750.00 0.00 0.0 4733.67 -194.65 266.93 0.00 330.36 4750.00 0.00 0.0 4733.67 -194.65 266.93 0.00 330.36 4850.00 0.00 0.0 4733.67 -194.65 266.93 0.00 330.36 4850.00 0.00 0.0 4733.67 -194.65 266.93 0.00 330.36 4850.00 0.00 0.0 4733.67 -194.65 266.93 0.00 330.36 4850.00 0.00 0.0 4833.67 -194.65 266.93 0.00 330.36 4850.00 0.00 0.0 4733.67 -194.65 266.93 0.00 330.36 4850.00 0.00 0.0 4733.67 -194.65 266.93 0.00 330.36 4850.00 0.00 0.0 4733.67 -194.65 266.93 0.00 330.36 4850.00 0.00 0.0 4733.67 -194.65 266.93 0.00 330.36 4850.00 0.00 0.0 4733.67 -194.65 266.93 0.00 330.36											
3850.00											
3900.00											
4000.00       3.00       126.1       3983.81       -190.02       260.58       1.00       322.51         4050.00       2.50       126.1       4033.75       -191.43       262.52       1.00       324.91         4100.00       2.00       126.1       4083.72       -192.59       264.11       1.00       326.87         4150.00       1.50       126.1       4183.69       -193.49       265.34       1.00       328.40         4200.00       1.00       126.1       4183.68       -194.13       266.22       1.00       329.49         4250.00       0.50       126.1       4233.68       -194.52       266.75       1.00       330.14         **** END DROP (at MD = 4300.00)       (at MD = 4300.00)       330.36       194.65       266.93       1.00       330.36         4350.00       0.00       0.0       4383.67       -194.65       266.93       0.00       330.36         4450.00       0.00       0.0       4483.67       -194.65       266.93       0.00       330.36         450.00       0.00       0.0       4533.67       -194.65       266.93       0.00       330.36         450.00       0.00       0.0       4533.67											
4000.00 3.00 126.1 8983.81 -190.02 260.58 1.00 322.51 4050.00 2.50 126.1 4033.75 -191.43 262.52 1.00 324.91 4100.00 2.00 126.1 4083.72 -192.59 264.11 1.00 326.87 4150.00 1.50 126.1 4133.69 -193.49 265.34 1.00 328.40 4200.00 1.00 126.1 4183.68 -194.13 266.22 1.00 329.49 4250.00 0.50 126.1 4233.68 -194.52 266.75 1.00 330.14 *** END DROP (at MD = 4300.00) 4300.00 0.00 0.0 4283.67 -194.65 266.93 1.00 330.36 4350.00 0.00 0.0 4333.67 -194.65 266.93 0.00 330.36 4400.00 0.00 0.0 4433.67 -194.65 266.93 0.00 330.36 4500.00 0.00 0.0 4483.67 -194.65 266.93 0.00 330.36 4500.00 0.00 0.0 4533.67 -194.65 266.93 0.00 330.36 4500.00 0.00 0.0 4533.67 -194.65 266.93 0.00 330.36 4600.00 0.00 0.0 4533.67 -194.65 266.93 0.00 330.36 4600.00 0.00 0.0 4633.67 -194.65 266.93 0.00 330.36 4600.00 0.00 0.0 4633.67 -194.65 266.93 0.00 330.36 4600.00 0.00 0.0 4633.67 -194.65 266.93 0.00 330.36 4600.00 0.00 0.0 4683.67 -194.65 266.93 0.00 330.36 4600.00 0.00 0.0 4683.67 -194.65 266.93 0.00 330.36 4600.00 0.00 0.0 4683.67 -194.65 266.93 0.00 330.36 4600.00 0.00 0.0 4683.67 -194.65 266.93 0.00 330.36 4600.00 0.00 0.0 4733.67 -194.65 266.93 0.00 330.36 4600.00 0.00 0.0 4733.67 -194.65 266.93 0.00 330.36 4600.00 0.00 0.0 4833.67 -194.65 266.93 0.00 330.36 4600.00 0.00 0.0 4833.67 -194.65 266.93 0.00 330.36 4600.00 0.00 0.0 4683.67 -194.65 266.93 0.00 330.36 4600.00 0.00 0.0 4683.67 -194.65 266.93 0.00 330.36 4600.00 0.00 0.0 4733.67 -194.65 266.93 0.00 330.36 4600.00 0.00 0.0 4733.67 -194.65 266.93 0.00 330.36 4600.00 0.00 0.0 4783.67 -194.65 266.93 0.00 330.36 4800.00 0.00 0.0 4833.67 -194.65 266.93 0.00 330.36 4800.00 0.00 0.0 4833.67 -194.65 266.93 0.00 330.36 4800.00 0.00 0.0 4833.67 -194.65 266.93 0.00 330.36 4800.00 0.00 0.0 4833.67 -194.65 266.93 0.00 330.36 4800.00 0.00 0.0 4833.67 -194.65 266.93 0.00 330.36 4800.00 0.00 0.0 4833.67 -194.65 266.93 0.00 330.36 4800.00 0.00 0.0 4833.67 -194.65 266.93 0.00 330.36 4800.00 0.00 0.0 4833.67 -194.65 266.93 0.00 330.36 4800.00 0.00 0.00 0.00 4833.67 -194.65 266.93 0.00 330.36	2050.00	0.50	100.1	0000.00	100.05	050.00	1.00	010.07			
4050.00				<b>A</b>							
4100.00 2.00 126.1 4083.72 -192.59 264.11 1.00 326.87 4150.00 1.50 126.1 4133.69 -193.49 265.34 1.00 328.40 4200.00 1.00 126.1 4183.68 -194.13 266.22 1.00 329.49 4250.00 0.50 126.1 4233.68 -194.52 266.75 1.00 330.14 **** END DROP (at MD = 4300.00) 4300.00 0.00 0.0 4283.67 -194.65 266.93 1.00 330.36 4350.00 0.00 0.0 4383.67 -194.65 266.93 0.00 330.36 4400.00 0.00 0.0 4433.67 -194.65 266.93 0.00 330.36 4450.00 0.00 0.0 4433.67 -194.65 266.93 0.00 330.36 4550.00 0.00 0.0 4483.67 -194.65 266.93 0.00 330.36 4500.00 0.00 0.0 4533.67 -194.65 266.93 0.00 330.36 4600.00 0.00 0.0 4683.67 -194.65 266.93 0.00 330.36 4700.00 0.00 0.0 4683.67 -194.65 266.93 0.00 330.36 4700.00 0.00 0.0 4733.67 -194.65 266.93 0.00 330.36 4700.00 0.00 0.0 4733.67 -194.65 266.93 0.00 330.36 4700.00 0.00 0.0 4733.67 -194.65 266.93 0.00 330.36 4800.00 0.00 0.0 4783.67 -194.65 266.93 0.00 330.36 4800.00 0.00 0.0 4783.67 -194.65 266.93 0.00 330.36 4800.00 0.00 0.0 4833.67 -194.65 266.93 0.00 330.36											
4150.00 1.50 126.1 4133.69 -193.49 265.34 1.00 328.40  4200.00 1.00 126.1 4183.68 -194.13 266.22 1.00 329.49  4250.00 0.50 126.1 4233.68 -194.52 266.75 1.00 330.14  *** END DROP (at MD = 4300.00)  4300.00 0.00 0.0 4283.67 -194.65 266.93 1.00 330.36  4350.00 0.00 0.0 4333.67 -194.65 266.93 0.00 330.36  4400.00 0.00 0.0 4433.67 -194.65 266.93 0.00 330.36  4450.00 0.00 0.0 4483.67 -194.65 266.93 0.00 330.36  4500.00 0.00 0.0 4483.67 -194.65 266.93 0.00 330.36  4500.00 0.00 0.0 4533.67 -194.65 266.93 0.00 330.36  4500.00 0.00 0.0 4533.67 -194.65 266.93 0.00 330.36  4600.00 0.00 0.0 4533.67 -194.65 266.93 0.00 330.36  4700.00 0.00 0.0 4683.67 -194.65 266.93 0.00 330.36  4700.00 0.00 0.0 4683.67 -194.65 266.93 0.00 330.36  4700.00 0.00 0.0 4733.67 -194.65 266.93 0.00 330.36  4700.00 0.00 0.0 4733.67 -194.65 266.93 0.00 330.36  4800.00 0.00 0.0 4783.67 -194.65 266.93 0.00 330.36  4800.00 0.00 0.0 4783.67 -194.65 266.93 0.00 330.36  4850.00 0.00 0.0 4783.67 -194.65 266.93 0.00 330.36											
4200.00											
4250.00       0.50       126.1       4233.68       -194.52       266.75       1.00       330.14         **** END DROP       (at MD = 4300.00)        4300.00       0.00       0.0       4283.67       -194.65       266.93       1.00       330.36         4350.00       0.00       0.0       4333.67       -194.65       266.93       0.00       330.36         4450.00       0.00       0.0       4433.67       -194.65       266.93       0.00       330.36         4500.00       0.00       0.0       4483.67       -194.65       266.93       0.00       330.36         4500.00       0.00       0.0       4533.67       -194.65       266.93       0.00       330.36         4500.00       0.00       0.0       4583.67       -194.65       266.93       0.00       330.36         4600.00       0.00       0.0       4683.67       -194.65       266.93       0.00       330.36         4700.00       0.00       0.0       4783.67       -194.65       266.93       0.00       330.36         4750.00       0.00       0.0       4783.67       -194.65       266.93       0.00       330.36         4800.00 <td< td=""><td>1100.00</td><td>1.00</td><td>120.1</td><td>1100.00</td><td>100.10</td><td>200.01</td><td>1.00</td><td>020.10</td><td></td><td></td><td></td></td<>	1100.00	1.00	120.1	1100.00	100.10	200.01	1.00	020.10			
*** END DROP (at MD = 4300.00)  4300.00				4183.68							
4300.00       0.00       0.0       4283.67       -194.65       266.93       1.00       330.36         4350.00       0.00       0.0       4333.67       -194.65       266.93       0.00       330.36         4400.00       0.00       0.0       4383.67       -194.65       266.93       0.00       330.36         4450.00       0.00       0.0       4483.67       -194.65       266.93       0.00       330.36         4500.00       0.00       0.0       4533.67       -194.65       266.93       0.00       330.36         4500.00       0.00       0.0       4583.67       -194.65       266.93       0.00       330.36         4600.00       0.00       0.0       4683.67       -194.65       266.93       0.00       330.36         4700.00       0.00       0.0       4683.67       -194.65       266.93       0.00       330.36         4700.00       0.00       0.0       4733.67       -194.65       266.93       0.00       330.36         4800.00       0.00       0.0       4783.67       -194.65       266.93       0.00       330.36         4850.00       0.00       0.0       4883.67       -194.65       <					-194.52	266.75	1.00	330.14			
4350.00       0.00       0.0       4333.67       -194.65       266.93       0.00       330.36         4400.00       0.00       0.0       4383.67       -194.65       266.93       0.00       330.36         4450.00       0.00       0.0       4433.67       -194.65       266.93       0.00       330.36         4500.00       0.00       0.0       4483.67       -194.65       266.93       0.00       330.36         4500.00       0.00       0.0       4533.67       -194.65       266.93       0.00       330.36         4600.00       0.00       0.0       4633.67       -194.65       266.93       0.00       330.36         4700.00       0.00       0.0       4683.67       -194.65       266.93       0.00       330.36         4750.00       0.00       0.0       4733.67       -194.65       266.93       0.00       330.36         4800.00       0.00       0.0       4783.67       -194.65       266.93       0.00       330.36         4850.00       0.00       0.0       4833.67       -194.65       266.93       0.00       330.36		•		•							
4400.00       0.00       0.00       4383.67       -194.65       266.93       0.00       330.36         4450.00       0.00       0.00       4433.67       -194.65       266.93       0.00       330.36         4500.00       0.00       0.00       4483.67       -194.65       266.93       0.00       330.36         4550.00       0.00       0.0       4583.67       -194.65       266.93       0.00       330.36         4600.00       0.00       0.0       4633.67       -194.65       266.93       0.00       330.36         4700.00       0.00       0.0       4683.67       -194.65       266.93       0.00       330.36         4750.00       0.00       0.0       4733.67       -194.65       266.93       0.00       330.36         4800.00       0.00       0.0       4783.67       -194.65       266.93       0.00       330.36         4850.00       0.00       0.0       4833.67       -194.65       266.93       0.00       330.36											
4450.00       0.00       0.0       4433.67       -194.65       266.93       0.00       330.36         4500.00       0.00       0.0       4483.67       -194.65       266.93       0.00       330.36         4550.00       0.00       0.0       4533.67       -194.65       266.93       0.00       330.36         4600.00       0.00       0.0       4583.67       -194.65       266.93       0.00       330.36         4650.00       0.00       0.0       4683.67       -194.65       266.93       0.00       330.36         4700.00       0.00       0.0       4733.67       -194.65       266.93       0.00       330.36         4750.00       0.00       0.0       4783.67       -194.65       266.93       0.00       330.36         4800.00       0.00       0.0       4833.67       -194.65       266.93       0.00       330.36         4850.00       0.00       0.0       4833.67       -194.65       266.93       0.00       330.36											
4500.00       0.00       0.0       4483.67       -194.65       266.93       0.00       330.36         4550.00       0.00       0.0       4533.67       -194.65       266.93       0.00       330.36         4600.00       0.00       0.0       4583.67       -194.65       266.93       0.00       330.36         4650.00       0.00       0.0       4633.67       -194.65       266.93       0.00       330.36         4700.00       0.00       0.0       4733.67       -194.65       266.93       0.00       330.36         4750.00       0.00       0.0       4783.67       -194.65       266.93       0.00       330.36         4800.00       0.00       0.0       4833.67       -194.65       266.93       0.00       330.36         4850.00       0.00       0.0       4833.67       -194.65       266.93       0.00       330.36	4400.00	0.00	0.0	4383.67	-194.65	266.93	0.00	330.36			
4500.00       0.00       0.0       4483.67       -194.65       266.93       0.00       330.36         4550.00       0.00       0.0       4533.67       -194.65       266.93       0.00       330.36         4600.00       0.00       0.0       4583.67       -194.65       266.93       0.00       330.36         4650.00       0.00       0.0       4683.67       -194.65       266.93       0.00       330.36         4700.00       0.00       0.0       4733.67       -194.65       266.93       0.00       330.36         4800.00       0.00       0.0       4783.67       -194.65       266.93       0.00       330.36         4850.00       0.00       0.0       4833.67       -194.65       266.93       0.00       330.36	4450.00	0.00	0.0	4433.67	-194.65	266.93	0.00	330.36			
4550.00       0.00       0.0       4533.67       -194.65       266.93       0.00       330.36         4600.00       0.00       0.0       4583.67       -194.65       266.93       0.00       330.36         4650.00       0.00       0.0       4633.67       -194.65       266.93       0.00       330.36         4700.00       0.00       0.0       4683.67       -194.65       266.93       0.00       330.36         4750.00       0.00       0.0       4733.67       -194.65       266.93       0.00       330.36         4800.00       0.00       0.0       4783.67       -194.65       266.93       0.00       330.36         4850.00       0.00       0.0       4833.67       -194.65       266.93       0.00       330.36											
4650.00       0.00       0.0       4633.67       -194.65       266.93       0.00       330.36         4700.00       0.00       0.0       4683.67       -194.65       266.93       0.00       330.36         4750.00       0.00       0.0       4733.67       -194.65       266.93       0.00       330.36         4800.00       0.00       0.0       4783.67       -194.65       266.93       0.00       330.36         4850.00       0.00       0.0       4833.67       -194.65       266.93       0.00       330.36	4550.00	0.00	0.0	4533.67	-194.65	266.93	0.00	330.36			
4700.00       0.00       0.0       4683.67       -194.65       266.93       0.00       330.36         4750.00       0.00       0.0       4733.67       -194.65       266.93       0.00       330.36         4800.00       0.00       0.0       4783.67       -194.65       266.93       0.00       330.36         4850.00       0.00       0.0       4833.67       -194.65       266.93       0.00       330.36	4600.00	0.00	0.0	4583.67	-194.65	266.93	0.00	330.36			
4750.00       0.00       0.0       4733.67       -194.65       266.93       0.00       330.36         4800.00       0.00       0.0       4783.67       -194.65       266.93       0.00       330.36         4850.00       0.00       0.0       4833.67       -194.65       266.93       0.00       330.36	4650.00	0.00	0.0	4633.67	-194.65	266.93	0.00	330.36			
4750.00       0.00       0.0       4733.67       -194.65       266.93       0.00       330.36         4800.00       0.00       0.0       4783.67       -194.65       266.93       0.00       330.36         4850.00       0.00       0.0       4833.67       -194.65       266.93       0.00       330.36	<u> </u>	0.00	0.0	4683 67	-10/ 65	266 Q2	0.00	330 36			
4800.00 0.00 0.0 4783.67 -194.65 266.93 0.00 330.36 4850.00 0.00 0.0 4833.67 -194.65 266.93 0.00 330.36											
4850.00 0.00 0.0 4833.67 -194.65 266.93 0.00 330.36											
4950.00 0.00 0.0 4933.67 -194.65 266.93 0.00 330.36	4950.00	0.00	0.0	4933.67	-194.65	266.93	0.00	330.36			

SES - Stoner Engineering Software

Operator   Petroglyph   Field   County   Duchesne   State   UT   County   USA   Survey Calculation Method   Minimum Curvature   Database   Access   State   UT   County   USA   User   Survey Calculation Method   Minimum Curvature   Database   Access   Surface   Surface   Surface   Surface   Surface   Lat Long   Ref   Surface   Lat Long   Ref   Surface   Surface   Lat Long   Ref   Lat L	County   Duchesne   Pian   1					13	2-03-E4	, Plan	1			
Site   Name   UWI   Surface   Surface   Surface   Surface   Lat	Site   Name   UWI   Surface   Surface   Surface   Surface   Lat	Field Well Name	12-03-E4			County State	Duchesne UT		Verti	cal Section Azimut Calculation Metho	th 126.1 od Minimum Curva	
Project         Surface Z         Ground Level           DIRECTIONAL WELL PLAN           MD* INC* AZI* TVD* N* Let deg deg ft the ft th	Project	Sid Slot Nam	te ie	L 1718' FV	UWI			Surface Surface	eX eY	Surface	Long	
MD*         INC*         AZI*         TVD*         N*         E* DLS*         V. S.*         MapE*         MapN* SysTVI           5000.00         0.00         0.00         4983.67         -194.65         266.93         0.00         330.36           5050.00         0.00         0.0         5033.67         -194.65         266.93         0.00         330.36           5100.00         0.00         0.0         5083.67         -194.65         266.93         0.00         330.36           5200.00         0.00         0.0         5133.67         -194.65         266.93         0.00         330.36           5200.00         0.00         0.0         5183.67         -194.65         266.93         0.00         330.36           5250.00         0.00         0.0         5233.67         -194.65         266.93         0.00         330.36           5350.00         0.00         0.0         5333.67         -194.65         266.93         0.00         330.36           5400.00         0.00         0.0         5433.67         -194.65         266.93         0.00         330.36           5500.00         0.00         0.0         5433.67         -194.65         266.93	MD* INC* AZI* TVD* N* E* DLS* V. S.* MapE* MapN* SysTV ft deg deg ft				API					Ground	l Level	
ft deg deg ft	ft deg deg ft ft ft ft ft 7100ft ft f	DIRECTIONA	AL WELL PL	_AN								
5000.00 0.00 0.0 4983.67 -194.65 266.93 0.00 330.36 5100.00 0.00 0.0 5083.67 -194.65 266.93 0.00 330.36 5150.00 0.00 0.0 5183.67 -194.65 266.93 0.00 330.36 5150.00 0.00 0.0 5183.67 -194.65 266.93 0.00 330.36 5250.00 0.00 0.0 5283.67 -194.65 266.93 0.00 330.36 5250.00 0.00 0.0 5283.67 -194.65 266.93 0.00 330.36 5300.00 0.00 0.0 5283.67 -194.65 266.93 0.00 330.36 5300.00 0.00 0.0 5383.67 -194.65 266.93 0.00 330.36 5300.00 0.00 0.0 5383.67 -194.65 266.93 0.00 330.36 5450.00 0.00 0.0 5483.67 -194.65 266.93 0.00 330.36 5500.00 0.00 0.0 5483.67 -194.65 266.93 0.00 330.36 5550.00 0.00 0.0 5483.67 -194.65 266.93 0.00 330.36 5550.00 0.00 0.0 5583.67 -194.65 266.93 0.00 330.36 5550.00 0.00 0.0 5583.67 -194.65 266.93 0.00 330.36 5550.00 0.00 0.0 5583.67 -194.65 266.93 0.00 330.36 5550.00 0.00 0.0 5583.67 -194.65 266.93 0.00 330.36 5550.00 0.00 0.0 5583.67 -194.65 266.93 0.00 330.36 5550.00 0.00 0.0 5583.67 -194.65 266.93 0.00 330.36 5550.00 0.00 0.0 5583.67 -194.65 266.93 0.00 330.36 5550.00 0.00 0.0 5883.67 -194.65 266.93 0.00 330.36 5550.00 0.00 0.0 5883.67 -194.65 266.93 0.00 330.36 5550.00 0.00 0.0 5883.67 -194.65 266.93 0.00 330.36 5550.00 0.00 0.0 5783.67 -194.65 266.93 0.00 330.36 5550.00 0.00 0.0 5883.67 -194.65 266.93 0.00 330.36 5550.00 0.00 0.0 5883.67 -194.65 266.93 0.00 330.36 5550.00 0.00 0.0 5883.67 -194.65 266.93 0.00 330.36 5550.00 0.00 0.0 5883.67 -194.65 266.93 0.00 330.36 5550.00 0.00 0.0 5883.67 -194.65 266.93 0.00 330.36 5550.00 0.00 0.0 5883.67 -194.65 266.93 0.00 330.36 5550.00 0.00 0.0 5883.67 -194.65 266.93 0.00 330.36 5550.00 0.00 0.0 5883.67 -194.65 266.93 0.00 330.36 5550.00 0.00 0.0 5883.67 -194.65 266.93 0.00 330.36 5550.00 0.00 0.0 5883.67 -194.65 266.93 0.00 330.36 5550.00 0.00 0.0 5883.67 -194.65 266.93 0.00 330.36 5550.00 0.00 0.0 5883.67 -194.65 266.93 0.00 330.36 5550.00 0.00 0.0 5883.67 -194.65 266.93 0.00 330.36 5550.00 0.00 0.0 5883.67 -194.65 266.93 0.00 330.36 5550.00 0.00 0.0 5883.67 -194.65 266.93 0.00 330.36 5550.00 0.00 0.0 5883.67 -194.65 266.93 0.00 330.36 5550.00 0.00 0.00	5000.00 0.00 0.0 4983.67 -194.65 266.93 0.00 330.36 5050.00 0.00 0.0 5033.67 -194.65 266.93 0.00 330.36 5150.00 0.00 0.0 5033.67 -194.65 266.93 0.00 330.36 5150.00 0.00 0.0 5133.67 -194.65 266.93 0.00 330.36 5250.00 0.00 0.0 5233.67 -194.65 266.93 0.00 330.36 5250.00 0.00 0.0 5233.67 -194.65 266.93 0.00 330.36 5300.00 0.00 0.0 5233.67 -194.65 266.93 0.00 330.36 5300.00 0.00 0.0 5333.67 -194.65 266.93 0.00 330.36 5300.00 0.00 0.0 5333.67 -194.65 266.93 0.00 330.36 5350.00 0.00 0.0 5383.67 -194.65 266.93 0.00 330.36 5400.00 0.00 0.0 5383.67 -194.65 266.93 0.00 330.36 5500.00 0.00 0.0 5433.67 -194.65 266.93 0.00 330.36 5500.00 0.00 0.0 5533.67 -194.65 266.93 0.00 330.36 5500.00 0.00 0.0 5533.67 -194.65 266.93 0.00 330.36 5500.00 0.00 0.0 5533.67 -194.65 266.93 0.00 330.36 5500.00 0.00 0.0 5533.67 -194.65 266.93 0.00 330.36 5500.00 0.00 0.0 5533.67 -194.65 266.93 0.00 330.36 5500.00 0.00 0.0 5533.67 -194.65 266.93 0.00 330.36 5500.00 0.00 0.0 5533.67 -194.65 266.93 0.00 330.36 5500.00 0.00 0.0 5533.67 -194.65 266.93 0.00 330.36 5500.00 0.00 0.0 5533.67 -194.65 266.93 0.00 330.36 5500.00 0.00 0.0 583.67 -194.65 266.93 0.00 330.36 5500.00 0.00 0.0 583.67 -194.65 266.93 0.00 330.36 5500.00 0.00 0.0 583.67 -194.65 266.93 0.00 330.36 5500.00 0.00 0.0 583.67 -194.65 266.93 0.00 330.36 5500.00 0.00 0.0 583.67 -194.65 266.93 0.00 330.36 5500.00 0.00 0.0 583.67 -194.65 266.93 0.00 330.36 5500.00 0.00 0.0 583.67 -194.65 266.93 0.00 330.36 5500.00 0.00 0.0 583.67 -194.65 266.93 0.00 330.36 5500.00 0.00 0.0 583.67 -194.65 266.93 0.00 330.36 5500.00 0.00 0.0 583.67 -194.65 266.93 0.00 330.36 5500.00 0.00 0.0 583.67 -194.65 266.93 0.00 330.36 5500.00 0.00 0.0 583.67 -194.65 266.93 0.00 330.36 5500.00 0.00 0.0 583.67 -194.65 266.93 0.00 330.36 5500.00 0.00 0.0 583.67 -194.65 266.93 0.00 330.36 5500.00 0.00 0.0 583.67 -194.65 266.93 0.00 330.36 5500.00 0.00 0.0 583.67 -194.65 266.93 0.00 330.36 5500.00 0.00 0.0 583.67 -194.65 266.93 0.00 330.36 5500.00 0.00 0.0 583.67 -194.65 266.93 0.00 330.36 5500.00 0.00 0.0 583.67 -194.65 266.	MD*	INC*	AZI*	TVD*	N*	E*	DLS*	V. S.*	MapE*	MapN* Sy	sTVD
5050.00 0.00 0.0 5033.67 -194.65 266.93 0.00 330.36 5100.00 0.00 0.0 5183.67 -194.65 266.93 0.00 330.36 5150.00 0.00 0.0 5183.67 -194.65 266.93 0.00 330.36 5250.00 0.00 0.0 5233.67 -194.65 266.93 0.00 330.36 5300.00 0.00 0.0 5283.67 -194.65 266.93 0.00 330.36 5300.00 0.00 0.0 5383.67 -194.65 266.93 0.00 330.36 5300.00 0.00 0.0 5383.67 -194.65 266.93 0.00 330.36 5400.00 0.00 0.0 5383.67 -194.65 266.93 0.00 330.36 5400.00 0.00 0.0 5483.67 -194.65 266.93 0.00 330.36 5500.00 0.00 0.0 5483.67 -194.65 266.93 0.00 330.36 5500.00 0.00 0.0 5483.67 -194.65 266.93 0.00 330.36 5550.00 0.00 0.0 5533.67 -194.65 266.93 0.00 330.36 5550.00 0.00 0.0 5533.67 -194.65 266.93 0.00 330.36 5550.00 0.00 0.0 5533.67 -194.65 266.93 0.00 330.36 5550.00 0.00 0.0 5533.67 -194.65 266.93 0.00 330.36 5550.00 0.00 0.0 5533.67 -194.65 266.93 0.00 330.36 5550.00 0.00 0.0 5533.67 -194.65 266.93 0.00 330.36 5550.00 0.00 0.0 5683.67 -194.65 266.93 0.00 330.36 5550.00 0.00 0.0 5683.67 -194.65 266.93 0.00 330.36 5550.00 0.00 0.0 5683.67 -194.65 266.93 0.00 330.36 5500.00 0.00 0.0 5683.67 -194.65 266.93 0.00 330.36 5500.00 0.00 0.0 5783.67 -194.65 266.93 0.00 330.36 5500.00 0.00 0.0 5783.67 -194.65 266.93 0.00 330.36 5500.00 0.00 0.0 5883.67 -194.65 266.93 0.00 330.36 5500.00 0.00 0.0 5883.67 -194.65 266.93 0.00 330.36 5500.00 0.00 0.0 5883.67 -194.65 266.93 0.00 330.36 5500.00 0.00 0.0 5883.67 -194.65 266.93 0.00 330.36 5500.00 0.00 0.0 5883.67 -194.65 266.93 0.00 330.36 5500.00 0.00 0.0 5883.67 -194.65 266.93 0.00 330.36 5500.00 0.00 0.0 5883.67 -194.65 266.93 0.00 330.36 5500.00 0.00 0.0 5883.67 -194.65 266.93 0.00 330.36 5500.00 0.00 0.0 5883.67 -194.65 266.93 0.00 330.36 5500.00 0.00 0.0 5883.67 -194.65 266.93 0.00 330.36 5500.00 0.00 0.0 5883.67 -194.65 266.93 0.00 330.36 5500.00 0.00 0.0 5883.67 -194.65 266.93 0.00 330.36 5500.00 0.00 0.0 5883.67 -194.65 266.93 0.00 330.36 5500.00 0.00 0.0 5883.67 -194.65 266.93 0.00 330.36 5500.00 0.00 0.0 5883.67 -194.65 266.93 0.00 330.36 5500.00 0.00 0.0 5883.67 -194.65 266.93 0.00 330.36 5500.00 0.00 0.00	5050.00 0.00 0.0 5033.67 -194.65 266.93 0.00 330.36 5150.00 0.00 0.0 5133.67 -194.65 266.93 0.00 330.36 5150.00 0.00 0.0 5133.67 -194.65 266.93 0.00 330.36 5250.00 0.00 0.0 5233.67 -194.65 266.93 0.00 330.36 5300.00 0.00 0.0 5233.67 -194.65 266.93 0.00 330.36 5300.00 0.00 0.0 5333.67 -194.65 266.93 0.00 330.36 5350.00 0.00 0.0 5383.67 -194.65 266.93 0.00 330.36 5450.00 0.00 0.0 5383.67 -194.65 266.93 0.00 330.36 5500.00 0.00 0.0 5483.67 -194.65 266.93 0.00 330.36 5500.00 0.00 0.0 5483.67 -194.65 266.93 0.00 330.36 5550.00 0.00 0.0 5483.67 -194.65 266.93 0.00 330.36 5550.00 0.00 0.0 5483.67 -194.65 266.93 0.00 330.36 5550.00 0.00 0.0 5533.67 -194.65 266.93 0.00 330.36 5550.00 0.00 0.0 5533.67 -194.65 266.93 0.00 330.36 5550.00 0.00 0.0 5533.67 -194.65 266.93 0.00 330.36 5550.00 0.00 0.0 5533.67 -194.65 266.93 0.00 330.36 5550.00 0.00 0.0 583.67 -194.65 266.93 0.00 330.36 5550.00 0.00 0.0 5633.67 -194.65 266.93 0.00 330.36 5550.00 0.00 0.0 583.67 -194.65 266.93 0.00 330.36 5550.00 0.00 0.0 583.67 -194.65 266.93 0.00 330.36 5550.00 0.00 0.0 5733.67 -194.65 266.93 0.00 330.36 5500.00 0.00 0.0 5733.67 -194.65 266.93 0.00 330.36 5500.00 0.00 0.0 5783.67 -194.65 266.93 0.00 330.36 5500.00 0.00 0.0 5883.67 -194.65 266.93 0.00 330.36 5500.00 0.00 0.0 5883.67 -194.65 266.93 0.00 330.36 5500.00 0.00 0.0 5883.67 -194.65 266.93 0.00 330.36 5500.00 0.00 0.0 5883.67 -194.65 266.93 0.00 330.36 5500.00 0.00 0.0 5883.67 -194.65 266.93 0.00 330.36 5500.00 0.00 0.0 5883.67 -194.65 266.93 0.00 330.36 5500.00 0.00 0.0 5883.67 -194.65 266.93 0.00 330.36 5500.00 0.00 0.0 5883.67 -194.65 266.93 0.00 330.36 5500.00 0.00 0.0 5883.67 -194.65 266.93 0.00 330.36 5500.00 0.00 0.0 5883.67 -194.65 266.93 0.00 330.36 5500.00 0.00 0.0 5883.67 -194.65 266.93 0.00 330.36 5500.00 0.00 0.0 5883.67 -194.65 266.93 0.00 330.36 5500.00 0.00 0.0 5883.67 -194.65 266.93 0.00 330.36 5500.00 0.00 0.0 5883.67 -194.65 266.93 0.00 330.36 5500.00 0.00 0.0 5883.67 -194.65 266.93 0.00 330.36 5500.00 0.00 0.0 5883.67 -194.65 266.93 0.00 330.36 5500.00 0.00 0.0 5883	ft	deg	deg	ft	ft	ft	%100ft	ft	ft	ft	f
5100.00 0.00 0.0 5083.67 -194.65 266.93 0.00 330.36  5200.00 0.00 0.0 5133.67 -194.65 266.93 0.00 330.36  5200.00 0.00 0.0 5183.67 -194.65 266.93 0.00 330.36  5250.00 0.00 0.0 5233.67 -194.65 266.93 0.00 330.36  5300.00 0.00 0.0 5283.67 -194.65 266.93 0.00 330.36  5350.00 0.00 0.0 5333.67 -194.65 266.93 0.00 330.36  5400.00 0.00 0.0 5333.67 -194.65 266.93 0.00 330.36  5450.00 0.00 0.0 5433.67 -194.65 266.93 0.00 330.36  5500.00 0.00 0.0 5483.67 -194.65 266.93 0.00 330.36  5550.00 0.00 0.0 5483.67 -194.65 266.93 0.00 330.36  5550.00 0.00 0.0 5533.67 -194.65 266.93 0.00 330.36  5600.00 0.00 0.0 5633.67 -194.65 266.93 0.00 330.36  5700.00 0.00 0.0 5633.67 -194.65 266.93 0.00 330.36  5700.00 0.00 0.0 5733.67 -194.65 266.93 0.00 330.36  5700.00 0.00 0.0 5733.67 -194.65 266.93 0.00 330.36  5800.00 0.00 0.0 5833.67 -194.65 266.93 0.00 330.36  5800.00 0.00 0.0 5833.67 -194.65 266.93 0.00 330.36  5800.00 0.00 0.0 5833.67 -194.65 266.93 0.00 330.36  5900.00 0.00 0.0 5833.67 -194.65 266.93 0.00 330.36  5900.00 0.00 0.0 5833.67 -194.65 266.93 0.00 330.36  5900.00 0.00 0.0 5833.67 -194.65 266.93 0.00 330.36  5950.00 0.00 0.0 5983.67 -194.65 266.93 0.00 330.36  5950.00 0.00 0.0 5983.67 -194.65 266.93 0.00 330.36  5950.00 0.00 0.0 5983.67 -194.65 266.93 0.00 330.36  5950.00 0.00 0.0 5983.67 -194.65 266.93 0.00 330.36  5950.00 0.00 0.0 5983.67 -194.65 266.93 0.00 330.36  5950.00 0.00 0.0 5983.67 -194.65 266.93 0.00 330.36	5100.00 0.00 0.0 5083.67 -194.65 266.93 0.00 330.36 5150.00 0.00 0.0 5133.67 -194.65 266.93 0.00 330.36 5200.00 0.00 0.0 5183.67 -194.65 266.93 0.00 330.36 5250.00 0.00 0.0 5233.67 -194.65 266.93 0.00 330.36 5300.00 0.00 0.0 5283.67 -194.65 266.93 0.00 330.36 5350.00 0.00 0.0 5333.67 -194.65 266.93 0.00 330.36 5400.00 0.00 0.0 5383.67 -194.65 266.93 0.00 330.36 5450.00 0.00 0.0 5483.67 -194.65 266.93 0.00 330.36 5500.00 0.00 0.0 5483.67 -194.65 266.93 0.00 330.36 5550.00 0.00 0.0 5483.67 -194.65 266.93 0.00 330.36 5550.00 0.00 0.0 5533.67 -194.65 266.93 0.00 330.36 5550.00 0.00 0.0 5533.67 -194.65 266.93 0.00 330.36 5600.00 0.00 0.0 5683.67 -194.65 266.93 0.00 330.36 5700.00 0.00 0.0 5683.67 -194.65 266.93 0.00 330.36 5750.00 0.00 0.0 5733.67 -194.65 266.93 0.00 330.36 5800.00 0.00 0.0 5883.67 -194.65 266.93 0.00 330.36 5800.00 0.00 0.0 5883.67 -194.65 266.93 0.00 330.36 5800.00 0.00 0.0 5883.67 -194.65 266.93 0.00 330.36 5800.00 0.00 0.0 5883.67 -194.65 266.93 0.00 330.36 5800.00 0.00 0.0 5883.67 -194.65 266.93 0.00 330.36 5800.00 0.00 0.0 5883.67 -194.65 266.93 0.00 330.36 5800.00 0.00 0.0 5883.67 -194.65 266.93 0.00 330.36 5800.00 0.00 0.0 5883.67 -194.65 266.93 0.00 330.36 5800.00 0.00 0.0 5883.67 -194.65 266.93 0.00 330.36 5800.00 0.00 0.0 5883.67 -194.65 266.93 0.00 330.36 5800.00 0.00 0.0 5883.67 -194.65 266.93 0.00 330.36 5800.00 0.00 0.0 5883.67 -194.65 266.93 0.00 330.36 5800.00 0.00 0.0 5883.67 -194.65 266.93 0.00 330.36 5800.00 0.00 0.0 5883.67 -194.65 266.93 0.00 330.36 5800.00 0.00 0.0 5883.67 -194.65 266.93 0.00 330.36 5800.00 0.00 0.0 5883.67 -194.65 266.93 0.00 330.36 5800.00 0.00 0.0 5883.67 -194.65 266.93 0.00 330.36	5000.00	0.00	0.0	4983.67	-194.65	266.93	0.00	330.36			
5150.00 0.00 0.0 5133.67 -194.65 266.93 0.00 330.36  5200.00 0.00 0.0 5233.67 -194.65 266.93 0.00 330.36  5250.00 0.00 0.0 5233.67 -194.65 266.93 0.00 330.36  5300.00 0.00 0.0 5283.67 -194.65 266.93 0.00 330.36  5350.00 0.00 0.0 5333.67 -194.65 266.93 0.00 330.36  5400.00 0.00 0.0 5333.67 -194.65 266.93 0.00 330.36  5450.00 0.00 0.0 5433.67 -194.65 266.93 0.00 330.36  5500.00 0.00 0.0 5433.67 -194.65 266.93 0.00 330.36  5550.00 0.00 0.0 5433.67 -194.65 266.93 0.00 330.36  5550.00 0.00 0.0 5483.67 -194.65 266.93 0.00 330.36  5650.00 0.00 0.0 5533.67 -194.65 266.93 0.00 330.36  5600.00 0.00 0.0 5683.67 -194.65 266.93 0.00 330.36  5770.00 0.00 0.0 5683.67 -194.65 266.93 0.00 330.36  5770.00 0.00 0.0 5733.67 -194.65 266.93 0.00 330.36  5800.00 0.00 0.0 5733.67 -194.65 266.93 0.00 330.36  5800.00 0.00 0.0 5833.67 -194.65 266.93 0.00 330.36  5950.00 0.00 0.0 5833.67 -194.65 266.93 0.00 330.36  5950.00 0.00 0.0 5833.67 -194.65 266.93 0.00 330.36  5950.00 0.00 0.0 5833.67 -194.65 266.93 0.00 330.36  5950.00 0.00 0.0 5933.67 -194.65 266.93 0.00 330.36  5950.00 0.00 0.0 5933.67 -194.65 266.93 0.00 330.36  5950.00 0.00 0.0 5983.67 -194.65 266.93 0.00 330.36  5950.00 0.00 0.0 5983.67 -194.65 266.93 0.00 330.36  5950.00 0.00 0.0 5983.67 -194.65 266.93 0.00 330.36  5950.00 0.00 0.0 5983.67 -194.65 266.93 0.00 330.36  5950.00 0.00 0.0 5983.67 -194.65 266.93 0.00 330.36  5950.00 0.00 0.0 5983.67 -194.65 266.93 0.00 330.36	5150.00 0.00 0.0 5133.67 -194.65 266.93 0.00 330.36  5200.00 0.00 0.0 5233.67 -194.65 266.93 0.00 330.36  5300.00 0.00 0.0 5233.67 -194.65 266.93 0.00 330.36  5350.00 0.00 0.0 5333.67 -194.65 266.93 0.00 330.36  5400.00 0.00 0.0 5333.67 -194.65 266.93 0.00 330.36  5450.00 0.00 0.0 5433.67 -194.65 266.93 0.00 330.36  5450.00 0.00 0.0 5433.67 -194.65 266.93 0.00 330.36  5550.00 0.00 0.0 5433.67 -194.65 266.93 0.00 330.36  5550.00 0.00 0.0 5533.67 -194.65 266.93 0.00 330.36  5550.00 0.00 0.0 5533.67 -194.65 266.93 0.00 330.36  5600.00 0.00 0.0 5633.67 -194.65 266.93 0.00 330.36  5750.00 0.00 0.0 5683.67 -194.65 266.93 0.00 330.36  5770.00 0.00 0.0 5733.67 -194.65 266.93 0.00 330.36  5750.00 0.00 0.0 5733.67 -194.65 266.93 0.00 330.36  5750.00 0.00 0.0 5733.67 -194.65 266.93 0.00 330.36  5750.00 0.00 0.0 5733.67 -194.65 266.93 0.00 330.36  5750.00 0.00 0.0 5833.67 -194.65 266.93 0.00 330.36  5800.00 0.00 0.0 5833.67 -194.65 266.93 0.00 330.36  5800.00 0.00 0.0 5833.67 -194.65 266.93 0.00 330.36  5950.00 0.00 0.0 5833.67 -194.65 266.93 0.00 330.36  5950.00 0.00 0.0 5983.67 -194.65 266.93 0.00 330.36  6000.00 0.00 0.0 5983.67 -194.65 266.93 0.00 330.36  6000.00 0.00 0.0 5983.67 -194.65 266.93 0.00 330.36  6000.00 0.00 0.0 5983.67 -194.65 266.93 0.00 330.36  6000.00 0.00 0.0 5983.67 -194.65 266.93 0.00 330.36  6000.00 0.00 0.0 5983.67 -194.65 266.93 0.00 330.36	5050.00	0.00	0.0	5033.67	-194.65	266.93	0.00	330.36			
5150.00 0.00 0.0 5133.67 -194.65 266.93 0.00 330.36  5200.00 0.00 0.0 5233.67 -194.65 266.93 0.00 330.36  5250.00 0.00 0.0 5233.67 -194.65 266.93 0.00 330.36  5300.00 0.00 0.0 5283.67 -194.65 266.93 0.00 330.36  5350.00 0.00 0.0 5333.67 -194.65 266.93 0.00 330.36  5400.00 0.00 0.0 5433.67 -194.65 266.93 0.00 330.36  5450.00 0.00 0.0 5433.67 -194.65 266.93 0.00 330.36  5500.00 0.00 0.0 5433.67 -194.65 266.93 0.00 330.36  5500.00 0.00 0.0 5433.67 -194.65 266.93 0.00 330.36  5500.00 0.00 0.0 5433.67 -194.65 266.93 0.00 330.36  5600.00 0.00 0.0 5533.67 -194.65 266.93 0.00 330.36  5600.00 0.00 0.0 5683.67 -194.65 266.93 0.00 330.36  5700.00 0.00 0.0 5683.67 -194.65 266.93 0.00 330.36  5700.00 0.00 0.0 5733.67 -194.65 266.93 0.00 330.36  5800.00 0.00 0.0 5833.67 -194.65 266.93 0.00 330.36  5800.00 0.00 0.0 5833.67 -194.65 266.93 0.00 330.36  5900.00 0.00 0.0 5833.67 -194.65 266.93 0.00 330.36  5900.00 0.00 0.0 5833.67 -194.65 266.93 0.00 330.36  5900.00 0.00 0.0 5833.67 -194.65 266.93 0.00 330.36  5900.00 0.00 0.0 5833.67 -194.65 266.93 0.00 330.36  5900.00 0.00 0.0 5933.67 -194.65 266.93 0.00 330.36  5900.00 0.00 0.0 5933.67 -194.65 266.93 0.00 330.36  5900.00 0.00 0.0 5983.67 -194.65 266.93 0.00 330.36  5900.00 0.00 0.0 5983.67 -194.65 266.93 0.00 330.36  5900.00 0.00 0.0 5983.67 -194.65 266.93 0.00 330.36  5900.00 0.00 0.0 5983.67 -194.65 266.93 0.00 330.36  5900.00 0.00 0.0 5983.67 -194.65 266.93 0.00 330.36	5150.00 0.00 0.0 5133.67 -194.65 266.93 0.00 330.36  5200.00 0.00 0.0 5233.67 -194.65 266.93 0.00 330.36  5300.00 0.00 0.0 5233.67 -194.65 266.93 0.00 330.36  5350.00 0.00 0.0 5333.67 -194.65 266.93 0.00 330.36  5400.00 0.00 0.0 5333.67 -194.65 266.93 0.00 330.36  5450.00 0.00 0.0 5433.67 -194.65 266.93 0.00 330.36  5450.00 0.00 0.0 5433.67 -194.65 266.93 0.00 330.36  5550.00 0.00 0.0 5433.67 -194.65 266.93 0.00 330.36  5550.00 0.00 0.0 5533.67 -194.65 266.93 0.00 330.36  5550.00 0.00 0.0 5533.67 -194.65 266.93 0.00 330.36  5650.00 0.00 0.0 5633.67 -194.65 266.93 0.00 330.36  5650.00 0.00 0.0 5683.67 -194.65 266.93 0.00 330.36  5750.00 0.00 0.0 5683.67 -194.65 266.93 0.00 330.36  5750.00 0.00 0.0 5733.67 -194.65 266.93 0.00 330.36  5750.00 0.00 0.0 5783.67 -194.65 266.93 0.00 330.36  5800.00 0.00 0.0 5833.67 -194.65 266.93 0.00 330.36  5800.00 0.00 0.0 5833.67 -194.65 266.93 0.00 330.36  5800.00 0.00 0.0 5833.67 -194.65 266.93 0.00 330.36  5950.00 0.00 0.0 5833.67 -194.65 266.93 0.00 330.36  5950.00 0.00 0.0 5833.67 -194.65 266.93 0.00 330.36  5950.00 0.00 0.0 5883.67 -194.65 266.93 0.00 330.36  6000.00 0.00 0.0 5983.67 -194.65 266.93 0.00 330.36  6000.00 0.00 0.0 5983.67 -194.65 266.93 0.00 330.36  6000.00 0.00 0.0 5983.67 -194.65 266.93 0.00 330.36  6000.00 0.00 0.0 5983.67 -194.65 266.93 0.00 330.36  6000.00 0.00 0.0 5983.67 -194.65 266.93 0.00 330.36  6000.00 0.00 0.0 5983.67 -194.65 266.93 0.00 330.36	5100.00	0.00	0.0	5083.67	-194.65	266.93	0.00	330.36			
5250.00	5250.00	5150.00			5133.67							
5250.00	5250.00	5200.00	0.00	0.0	5183.67	-194.65	266.93	0.00	330.36			
5300.00	5300.00 0.00 0.0 5283.67 -194.65 266.93 0.00 330.36 5350.00 0.00 0.0 5333.67 -194.65 266.93 0.00 330.36 5450.00 0.00 0.0 5383.67 -194.65 266.93 0.00 330.36  5450.00 0.00 0.0 5433.67 -194.65 266.93 0.00 330.36  5500.00 0.00 0.0 5483.67 -194.65 266.93 0.00 330.36  5550.00 0.00 0.0 5533.67 -194.65 266.93 0.00 330.36  5600.00 0.00 0.0 5583.67 -194.65 266.93 0.00 330.36  5650.00 0.00 0.0 5683.67 -194.65 266.93 0.00 330.36  5700.00 0.00 0.0 5683.67 -194.65 266.93 0.00 330.36  5700.00 0.00 0.0 5733.67 -194.65 266.93 0.00 330.36  5800.00 0.00 0.0 5783.67 -194.65 266.93 0.00 330.36  5850.00 0.00 0.0 5833.67 -194.65 266.93 0.00 330.36  5850.00 0.00 0.0 5833.67 -194.65 266.93 0.00 330.36  5950.00 0.00 0.0 5883.67 -194.65 266.93 0.00 330.36  5950.00 0.00 0.0 5933.67 -194.65 266.93 0.00 330.36  5950.00 0.00 0.0 5983.67 -194.65 266.93 0.00 330.36  6000.00 0.00 0.0 5983.67 -194.65 266.93 0.00 330.36  6000.00 0.00 0.0 5983.67 -194.65 266.93 0.00 330.36  6000.00 0.00 0.0 5983.67 -194.65 266.93 0.00 330.36  6000.00 0.00 0.0 5983.67 -194.65 266.93 0.00 330.36  6000.00 0.00 0.0 5983.67 -194.65 266.93 0.00 330.36  6000.00 0.00 0.0 5983.67 -194.65 266.93 0.00 330.36  6000.00 0.00 0.0 5983.67 -194.65 266.93 0.00 330.36  6000.00 0.00 0.0 6033.67 -194.65 266.93 0.00 330.36											
5350.00 0.00 0.0 5333.67 -194.65 266.93 0.00 330.36 5450.00 0.00 0.0 5433.67 -194.65 266.93 0.00 330.36  5450.00 0.00 0.0 5433.67 -194.65 266.93 0.00 330.36  5550.00 0.00 0.0 5433.67 -194.65 266.93 0.00 330.36  5550.00 0.00 0.0 5533.67 -194.65 266.93 0.00 330.36  5600.00 0.00 0.0 5533.67 -194.65 266.93 0.00 330.36  5650.00 0.00 0.0 5683.67 -194.65 266.93 0.00 330.36  5700.00 0.00 0.0 5683.67 -194.65 266.93 0.00 330.36  5700.00 0.00 0.0 5733.67 -194.65 266.93 0.00 330.36  5750.00 0.00 0.0 5733.67 -194.65 266.93 0.00 330.36  5800.00 0.00 0.0 5783.67 -194.65 266.93 0.00 330.36  5850.00 0.00 0.0 5833.67 -194.65 266.93 0.00 330.36  5850.00 0.00 0.0 5883.67 -194.65 266.93 0.00 330.36  5950.00 0.00 0.0 5883.67 -194.65 266.93 0.00 330.36  5950.00 0.00 0.0 5933.67 -194.65 266.93 0.00 330.36  6000.00 0.00 0.0 5983.67 -194.65 266.93 0.00 330.36  6000.00 0.00 0.0 5983.67 -194.65 266.93 0.00 330.36  6050.00 0.00 0.0 5983.67 -194.65 266.93 0.00 330.36  *** RTD (at MD = 6073.00)	5350.00 0.00 0.0 5333.67 -194.65 266.93 0.00 330.36 5450.00 0.00 0.0 5433.67 -194.65 266.93 0.00 330.36  5450.00 0.00 0.0 5433.67 -194.65 266.93 0.00 330.36  5500.00 0.00 0.0 5433.67 -194.65 266.93 0.00 330.36  5550.00 0.00 0.0 5533.67 -194.65 266.93 0.00 330.36  5600.00 0.00 0.0 5583.67 -194.65 266.93 0.00 330.36  5650.00 0.00 0.0 5683.67 -194.65 266.93 0.00 330.36  5700.00 0.00 0.0 5683.67 -194.65 266.93 0.00 330.36  5700.00 0.00 0.0 5733.67 -194.65 266.93 0.00 330.36  5800.00 0.00 0.0 5783.67 -194.65 266.93 0.00 330.36  5800.00 0.00 0.0 5783.67 -194.65 266.93 0.00 330.36  5850.00 0.00 0.0 5833.67 -194.65 266.93 0.00 330.36  5850.00 0.00 0.0 5833.67 -194.65 266.93 0.00 330.36  5950.00 0.00 0.0 5933.67 -194.65 266.93 0.00 330.36  5950.00 0.00 0.0 5933.67 -194.65 266.93 0.00 330.36  5950.00 0.00 0.0 5933.67 -194.65 266.93 0.00 330.36  6000.00 0.00 0.0 5983.67 -194.65 266.93 0.00 330.36  6050.00 0.00 0.0 5983.67 -194.65 266.93 0.00 330.36  6050.00 0.00 0.0 5983.67 -194.65 266.93 0.00 330.36  6050.00 0.00 0.0 5983.67 -194.65 266.93 0.00 330.36  6050.00 0.00 0.0 5983.67 -194.65 266.93 0.00 330.36											
5400.00       0.00       5383.67       -194.65       266.93       0.00       330.36         5450.00       0.00       0.0       5433.67       -194.65       266.93       0.00       330.36         5500.00       0.00       0.0       5483.67       -194.65       266.93       0.00       330.36         5550.00       0.00       0.0       5533.67       -194.65       266.93       0.00       330.36         5600.00       0.00       0.0       5683.67       -194.65       266.93       0.00       330.36         5700.00       0.00       0.0       5683.67       -194.65       266.93       0.00       330.36         5750.00       0.00       0.0       5733.67       -194.65       266.93       0.00       330.36         5800.00       0.00       0.0       5783.67       -194.65       266.93       0.00       330.36         5850.00       0.00       0.0       5833.67       -194.65       266.93       0.00       330.36         5900.00       0.00       0.0       5883.67       -194.65       266.93       0.00       330.36         5950.00       0.00       0.0       5983.67       -194.65       266.93	5400.00       0.00       5383.67       -194.65       266.93       0.00       330.36         5450.00       0.00       0.0       5433.67       -194.65       266.93       0.00       330.36         5500.00       0.00       0.0       5483.67       -194.65       266.93       0.00       330.36         5550.00       0.00       0.0       5533.67       -194.65       266.93       0.00       330.36         5600.00       0.00       0.0       5633.67       -194.65       266.93       0.00       330.36         5700.00       0.00       0.0       5683.67       -194.65       266.93       0.00       330.36         5750.00       0.00       0.0       5733.67       -194.65       266.93       0.00       330.36         5800.00       0.00       0.0       5783.67       -194.65       266.93       0.00       330.36         5850.00       0.00       0.0       5833.67       -194.65       266.93       0.00       330.36         5900.00       0.00       0.0       5983.67       -194.65       266.93       0.00       330.36         5950.00       0.00       0.0       5983.67       -194.65       266.93											
5500.00 0.00 0.0 5483.67 -194.65 266.93 0.00 330.36 5550.00 0.00 0.0 5533.67 -194.65 266.93 0.00 330.36 5600.00 0.00 0.0 5583.67 -194.65 266.93 0.00 330.36 5650.00 0.00 0.0 5683.67 -194.65 266.93 0.00 330.36 5650.00 0.00 0.0 5683.67 -194.65 266.93 0.00 330.36 5750.00 0.00 0.0 5733.67 -194.65 266.93 0.00 330.36 5750.00 0.00 0.0 5783.67 -194.65 266.93 0.00 330.36 5800.00 0.00 0.0 5783.67 -194.65 266.93 0.00 330.36 5850.00 0.00 0.0 5833.67 -194.65 266.93 0.00 330.36 5850.00 0.00 0.0 5883.67 -194.65 266.93 0.00 330.36 5900.00 0.00 0.0 5883.67 -194.65 266.93 0.00 330.36 5900.00 0.00 0.0 5883.67 -194.65 266.93 0.00 330.36 5900.00 0.00 0.0 5983.67 -194.65 266.93 0.00 330.36 5950.00 0.00 0.0 5983.67 -194.65 266.93 0.00 330.36 6000.00 0.00 0.0 5983.67 -194.65 266.93 0.00 330.36 6050.00 0.00 0.0 6033.67 -194.65 266.93 0.00 330.36 5950.00 0.00 0.00 0.0 5983.67 -194.65 266.93 0.00 330.36 6050.00 0.00 0.0 6033.67 -194.65 266.93 0.00 330.36 5950.00 0.00 0.00 0.00 5983.67 -194.65 266.93 0.00 330.36 6050.00 0.00 0.00 0.00 5983.67 -194.65 266.93 0.00 330.36 5950.00 0.00 0.00 0.00 5983.67 -194.65 266.93 0.00 330.36 5950.00 0.00 0.00 0.00 5983.67 -194.65 266.93 0.00 330.36 5950.00 0.00 0.00 0.00 5983.67 -194.65 266.93 0.00 330.36 5950.00 0.00 0.00 0.00 5983.67 -194.65 266.93 0.00 330.36 5950.00 0.00 0.00 0.00 5983.67 -194.65 266.93 0.00 330.36 5950.00 0.00 0.00 0.00 0.00 5983.67 -194.65 266.93 0.00 330.36 5950.00 0.00 0.00 0.00 0.00 5983.67 -194.65 266.93 0.00 330.36 5950.00 0.00 0.00 0.00 0.00 5983.67 -194.65 266.93 0.00 330.36 5950.00 0.00 0.00 0.00 0.00 0.00 0.00 0	5500.00 0.00 0.0 5483.67 -194.65 266.93 0.00 330.36 5550.00 0.00 0.0 5533.67 -194.65 266.93 0.00 330.36 5600.00 0.00 0.0 5583.67 -194.65 266.93 0.00 330.36 5650.00 0.00 0.0 5683.67 -194.65 266.93 0.00 330.36 5650.00 0.00 0.0 5683.67 -194.65 266.93 0.00 330.36 5750.00 0.00 0.0 5733.67 -194.65 266.93 0.00 330.36 5750.00 0.00 0.0 5783.67 -194.65 266.93 0.00 330.36 5800.00 0.00 0.0 5783.67 -194.65 266.93 0.00 330.36 5850.00 0.00 0.0 5883.67 -194.65 266.93 0.00 330.36 5850.00 0.00 0.0 5883.67 -194.65 266.93 0.00 330.36 5900.00 0.00 0.0 5883.67 -194.65 266.93 0.00 330.36 5900.00 0.00 0.0 5883.67 -194.65 266.93 0.00 330.36 5950.00 0.00 0.0 5983.67 -194.65 266.93 0.00 330.36 6000.00 0.00 0.0 5983.67 -194.65 266.93 0.00 330.36 6050.00 0.00 0.0 6033.67 -194.65 266.93 0.00 330.36 6050.00 0.00 0.0 6033.67 -194.65 266.93 0.00 330.36 6050.00 0.00 0.0 6033.67 -194.65 266.93 0.00 330.36 6050.00 0.00 0.00 6033.67 -194.65 266.93 0.00 330.36 6050.00 0.00 0.00 6033.67 -194.65 266.93 0.00 330.36 6050.00 0.00 0.00 6033.67 -194.65 266.93 0.00 330.36 6050.00 0.00 0.00 6033.67 -194.65 266.93 0.00 330.36 6050.00 0.00 0.00 6033.67 -194.65 266.93 0.00 330.36 6050.00 0.00 0.00 6033.67 -194.65 266.93 0.00 330.36 6050.00 0.00 0.00 6033.67 -194.65 266.93 0.00 330.36 6050.00 0.00 0.00 6033.67 -194.65 266.93 0.00 330.36 6050.00 0.00 0.00 6033.67 -194.65 266.93 0.00 330.36 6050.00 0.00 0.00 6033.67 -194.65 266.93 0.00 330.36 6050.00 0.00 0.00 6033.67 -194.65 266.93 0.00 330.36 6050.00 0.00 0.00 6033.67 -194.65 266.93 0.00 330.36 6050.00 0.00 0.00 6033.67 -194.65 266.93 0.00 330.36 6050.00 0.00 0.00 6033.67 -194.65 266.93 0.00 330.36 6050.00 0.00 0.00 6033.67 -194.65 266.93 0.00 330.36 6050.00 0.00 6033.67 -194.65 266.93 0.00 330.36 6050.00 0.00 6033.67 -194.65 266.93 0.00 6050.0											
5500.00 0.00 0.0 5483.67 -194.65 266.93 0.00 330.36 5550.00 0.00 0.0 5533.67 -194.65 266.93 0.00 330.36 5600.00 0.00 0.0 5583.67 -194.65 266.93 0.00 330.36 5650.00 0.00 0.0 5683.67 -194.65 266.93 0.00 330.36 5650.00 0.00 0.0 5683.67 -194.65 266.93 0.00 330.36 5750.00 0.00 0.0 5733.67 -194.65 266.93 0.00 330.36 5750.00 0.00 0.0 5783.67 -194.65 266.93 0.00 330.36 5800.00 0.00 0.0 5783.67 -194.65 266.93 0.00 330.36 5850.00 0.00 0.0 5833.67 -194.65 266.93 0.00 330.36 5850.00 0.00 0.0 5883.67 -194.65 266.93 0.00 330.36 5900.00 0.00 0.0 5883.67 -194.65 266.93 0.00 330.36 5900.00 0.00 0.0 5883.67 -194.65 266.93 0.00 330.36 5900.00 0.00 0.0 5983.67 -194.65 266.93 0.00 330.36 5950.00 0.00 0.0 5983.67 -194.65 266.93 0.00 330.36 6000.00 0.00 0.0 5983.67 -194.65 266.93 0.00 330.36 6050.00 0.00 0.0 6033.67 -194.65 266.93 0.00 330.36 5950.00 0.00 0.00 0.0 5983.67 -194.65 266.93 0.00 330.36 6050.00 0.00 0.0 6033.67 -194.65 266.93 0.00 330.36 5950.00 0.00 0.00 0.00 5983.67 -194.65 266.93 0.00 330.36 6050.00 0.00 0.00 0.00 5983.67 -194.65 266.93 0.00 330.36 5950.00 0.00 0.00 0.00 5983.67 -194.65 266.93 0.00 330.36 5950.00 0.00 0.00 0.00 5983.67 -194.65 266.93 0.00 330.36 5950.00 0.00 0.00 0.00 5983.67 -194.65 266.93 0.00 330.36 5950.00 0.00 0.00 0.00 5983.67 -194.65 266.93 0.00 330.36 5950.00 0.00 0.00 0.00 5983.67 -194.65 266.93 0.00 330.36 5950.00 0.00 0.00 0.00 0.00 5983.67 -194.65 266.93 0.00 330.36 5950.00 0.00 0.00 0.00 0.00 5983.67 -194.65 266.93 0.00 330.36 5950.00 0.00 0.00 0.00 0.00 5983.67 -194.65 266.93 0.00 330.36 5950.00 0.00 0.00 0.00 0.00 0.00 0.00 0	5500.00 0.00 0.0 5483.67 -194.65 266.93 0.00 330.36 5550.00 0.00 0.0 5533.67 -194.65 266.93 0.00 330.36 5600.00 0.00 0.0 5583.67 -194.65 266.93 0.00 330.36 5650.00 0.00 0.0 5683.67 -194.65 266.93 0.00 330.36 5650.00 0.00 0.0 5683.67 -194.65 266.93 0.00 330.36 5750.00 0.00 0.0 5733.67 -194.65 266.93 0.00 330.36 5750.00 0.00 0.0 5783.67 -194.65 266.93 0.00 330.36 5800.00 0.00 0.0 5783.67 -194.65 266.93 0.00 330.36 5850.00 0.00 0.0 5883.67 -194.65 266.93 0.00 330.36 5850.00 0.00 0.0 5883.67 -194.65 266.93 0.00 330.36 5900.00 0.00 0.0 5883.67 -194.65 266.93 0.00 330.36 5900.00 0.00 0.0 5883.67 -194.65 266.93 0.00 330.36 5950.00 0.00 0.0 5983.67 -194.65 266.93 0.00 330.36 6000.00 0.00 0.0 5983.67 -194.65 266.93 0.00 330.36 6050.00 0.00 0.0 6033.67 -194.65 266.93 0.00 330.36 6050.00 0.00 0.0 6033.67 -194.65 266.93 0.00 330.36 6050.00 0.00 0.0 6033.67 -194.65 266.93 0.00 330.36 6050.00 0.00 0.00 6033.67 -194.65 266.93 0.00 330.36 6050.00 0.00 0.00 6033.67 -194.65 266.93 0.00 330.36 6050.00 0.00 0.00 6033.67 -194.65 266.93 0.00 330.36 6050.00 0.00 0.00 6033.67 -194.65 266.93 0.00 330.36 6050.00 0.00 0.00 6033.67 -194.65 266.93 0.00 330.36 6050.00 0.00 0.00 6033.67 -194.65 266.93 0.00 330.36 6050.00 0.00 0.00 6033.67 -194.65 266.93 0.00 330.36 6050.00 0.00 0.00 6033.67 -194.65 266.93 0.00 330.36 6050.00 0.00 0.00 6033.67 -194.65 266.93 0.00 330.36 6050.00 0.00 0.00 6033.67 -194.65 266.93 0.00 330.36 6050.00 0.00 0.00 6033.67 -194.65 266.93 0.00 330.36 6050.00 0.00 0.00 6033.67 -194.65 266.93 0.00 330.36 6050.00 0.00 0.00 6033.67 -194.65 266.93 0.00 330.36 6050.00 0.00 0.00 6033.67 -194.65 266.93 0.00 330.36 6050.00 0.00 0.00 6033.67 -194.65 266.93 0.00 330.36 6050.00 0.00 6033.67 -194.65 266.93 0.00 330.36 6050.00 0.00 6033.67 -194.65 266.93 0.00 6050.0	5450 00	0.00	0.0	5433 67	-194 65	266.93	0.00	330.36			
5550.00 0.00 0.0 5533.67 -194.65 266.93 0.00 330.36 5650.00 0.00 0.0 5633.67 -194.65 266.93 0.00 330.36 5650.00 0.00 0.0 5633.67 -194.65 266.93 0.00 330.36 5750.00 0.00 0.0 5733.67 -194.65 266.93 0.00 330.36 5750.00 0.00 0.0 5783.67 -194.65 266.93 0.00 330.36 5800.00 0.00 0.0 5783.67 -194.65 266.93 0.00 330.36 5850.00 0.00 0.0 5833.67 -194.65 266.93 0.00 330.36 5850.00 0.00 0.0 5883.67 -194.65 266.93 0.00 330.36 5900.00 0.00 0.0 5883.67 -194.65 266.93 0.00 330.36 5900.00 0.00 0.0 5933.67 -194.65 266.93 0.00 330.36 5950.00 0.00 0.0 5933.67 -194.65 266.93 0.00 330.36 5950.00 0.00 0.0 5933.67 -194.65 266.93 0.00 330.36 5950.00 0.00 0.00 0.0 5933.67 -194.65 266.93 0.00 330.36 5950.00 0.00 0.00 0.0 5933.67 -194.65 266.93 0.00 330.36 5950.00 0.00 0.00 0.0 5933.67 -194.65 266.93 0.00 330.36 5950.00 0.00 0.00 0.0 5933.67 -194.65 266.93 0.00 330.36 5950.00 0.00 0.00 0.0 5933.67 -194.65 266.93 0.00 330.36 5950.00 0.00 0.00 0.00 0.00 5933.67 -194.65 266.93 0.00 330.36 5950.00 0.00 0.00 0.00 0.00 5983.67 -194.65 266.93 0.00 330.36 5950.00 0.00 0.00 0.00 0.00 5933.67 -194.65 266.93 0.00 330.36 5950.00 0.00 0.00 0.00 0.00 5933.67 -194.65 266.93 0.00 330.36 5950.00 0.00 0.00 0.00 0.00 5983.67 -194.65 266.93 0.00 330.36 5950.00 0.00 0.00 0.00 0.00 0.00 5983.67 -194.65 266.93 0.00 330.36 5950.00 0.00 0.00 0.00 0.00 0.00 0.00 0	5550.00 0.00 0.0 5533.67 -194.65 266.93 0.00 330.36 5600.00 0.00 0.0 5583.67 -194.65 266.93 0.00 330.36 5650.00 0.00 0.0 5633.67 -194.65 266.93 0.00 330.36 5700.00 0.00 0.0 5683.67 -194.65 266.93 0.00 330.36 5750.00 0.00 0.0 5733.67 -194.65 266.93 0.00 330.36 5800.00 0.00 0.0 5783.67 -194.65 266.93 0.00 330.36 5800.00 0.00 0.0 5833.67 -194.65 266.93 0.00 330.36 5850.00 0.00 0.0 5833.67 -194.65 266.93 0.00 330.36 5900.00 0.00 0.0 5833.67 -194.65 266.93 0.00 330.36 5950.00 0.00 0.0 5933.67 -194.65 266.93 0.00 330.36 6000.00 0.00 0.0 5983.67 -194.65 266.93 0.00 330.36 6050.00 0.00 0.0 6033.67 -194.65 266.93 0.00 330.36 6050.00 0.00 0.0 6033.67 -194.65 266.93 0.00 330.36											
5600.00 0.00 0.0 5583.67 -194.65 266.93 0.00 330.36  5700.00 0.00 0.0 5683.67 -194.65 266.93 0.00 330.36  5700.00 0.00 0.0 5683.67 -194.65 266.93 0.00 330.36  5750.00 0.00 0.0 5733.67 -194.65 266.93 0.00 330.36  5800.00 0.00 0.0 5783.67 -194.65 266.93 0.00 330.36  5850.00 0.00 0.0 5833.67 -194.65 266.93 0.00 330.36  5900.00 0.00 0.0 5883.67 -194.65 266.93 0.00 330.36  5950.00 0.00 0.0 5983.67 -194.65 266.93 0.00 330.36  5950.00 0.00 0.0 5983.67 -194.65 266.93 0.00 330.36  6000.00 0.00 0.0 5983.67 -194.65 266.93 0.00 330.36  6050.00 0.00 0.0 6033.67 -194.65 266.93 0.00 330.36  *** RTD (at MD = 6073.00)	5600.00 0.00 0.0 5583.67 -194.65 266.93 0.00 330.36  5700.00 0.00 0.0 5683.67 -194.65 266.93 0.00 330.36  5700.00 0.00 0.0 5683.67 -194.65 266.93 0.00 330.36  5750.00 0.00 0.0 5733.67 -194.65 266.93 0.00 330.36  5800.00 0.00 0.0 5783.67 -194.65 266.93 0.00 330.36  5850.00 0.00 0.0 5833.67 -194.65 266.93 0.00 330.36  5900.00 0.00 0.0 5883.67 -194.65 266.93 0.00 330.36  5950.00 0.00 0.0 5933.67 -194.65 266.93 0.00 330.36  6000.00 0.00 0.0 5983.67 -194.65 266.93 0.00 330.36  6000.00 0.00 0.0 5983.67 -194.65 266.93 0.00 330.36  6050.00 0.00 0.0 6033.67 -194.65 266.93 0.00 330.36  6050.00 0.00 0.0 6033.67 -194.65 266.93 0.00 330.36  6050.00 0.00 0.0 6033.67 -194.65 266.93 0.00 330.36											
5650.00 0.00 0.0 5633.67 -194.65 266.93 0.00 330.36  5700.00 0.00 0.0 5683.67 -194.65 266.93 0.00 330.36  5750.00 0.00 0.0 5733.67 -194.65 266.93 0.00 330.36  5800.00 0.00 0.0 5783.67 -194.65 266.93 0.00 330.36  5850.00 0.00 0.0 5833.67 -194.65 266.93 0.00 330.36  5900.00 0.00 0.0 5883.67 -194.65 266.93 0.00 330.36  5950.00 0.00 0.0 5933.67 -194.65 266.93 0.00 330.36  6000.00 0.00 0.0 5983.67 -194.65 266.93 0.00 330.36  6000.00 0.00 0.0 5983.67 -194.65 266.93 0.00 330.36  6050.00 0.00 0.0 6033.67 -194.65 266.93 0.00 330.36  *** RTD (at MD = 6073.00)	5650.00 0.00 0.0 5633.67 -194.65 266.93 0.00 330.36  5700.00 0.00 0.0 5683.67 -194.65 266.93 0.00 330.36  5750.00 0.00 0.0 5733.67 -194.65 266.93 0.00 330.36  5800.00 0.00 0.0 5783.67 -194.65 266.93 0.00 330.36  5850.00 0.00 0.0 5833.67 -194.65 266.93 0.00 330.36  5900.00 0.00 0.0 5883.67 -194.65 266.93 0.00 330.36  5950.00 0.00 0.0 5933.67 -194.65 266.93 0.00 330.36  6000.00 0.00 0.0 5983.67 -194.65 266.93 0.00 330.36  6050.00 0.00 0.0 6033.67 -194.65 266.93 0.00 330.36  *** RTD (at MD = 6073.00)											
5750.00 0.00 0.0 5733.67 -194.65 266.93 0.00 330.36 5800.00 0.00 0.0 5783.67 -194.65 266.93 0.00 330.36 5850.00 0.00 0.0 5833.67 -194.65 266.93 0.00 330.36 5900.00 0.00 0.0 5883.67 -194.65 266.93 0.00 330.36 5950.00 0.00 0.0 5933.67 -194.65 266.93 0.00 330.36 6000.00 0.00 0.0 5983.67 -194.65 266.93 0.00 330.36 6050.00 0.00 0.0 6033.67 -194.65 266.93 0.00 330.36 *** RTD (at MD = 6073.00)	5750.00 0.00 0.0 5733.67 -194.65 266.93 0.00 330.36 5800.00 0.00 0.0 5783.67 -194.65 266.93 0.00 330.36 5850.00 0.00 0.0 5833.67 -194.65 266.93 0.00 330.36 5900.00 0.00 0.0 5883.67 -194.65 266.93 0.00 330.36 5950.00 0.00 0.0 5933.67 -194.65 266.93 0.00 330.36 6000.00 0.00 0.0 5983.67 -194.65 266.93 0.00 330.36 6050.00 0.00 0.0 6033.67 -194.65 266.93 0.00 330.36 *** RTD (at MD = 6073.00)											
5750.00 0.00 0.0 5733.67 -194.65 266.93 0.00 330.36 5800.00 0.00 0.0 5783.67 -194.65 266.93 0.00 330.36 5850.00 0.00 0.0 5833.67 -194.65 266.93 0.00 330.36 5900.00 0.00 0.0 5883.67 -194.65 266.93 0.00 330.36 5950.00 0.00 0.0 5933.67 -194.65 266.93 0.00 330.36 6000.00 0.00 0.0 5983.67 -194.65 266.93 0.00 330.36 6050.00 0.00 0.0 6033.67 -194.65 266.93 0.00 330.36 *** RTD (at MD = 6073.00)	5750.00 0.00 0.0 5733.67 -194.65 266.93 0.00 330.36 5800.00 0.00 0.0 5783.67 -194.65 266.93 0.00 330.36 5850.00 0.00 0.0 5833.67 -194.65 266.93 0.00 330.36 5900.00 0.00 0.0 5883.67 -194.65 266.93 0.00 330.36 5950.00 0.00 0.0 5933.67 -194.65 266.93 0.00 330.36 6000.00 0.00 0.0 5983.67 -194.65 266.93 0.00 330.36 6050.00 0.00 0.0 6033.67 -194.65 266.93 0.00 330.36 *** RTD (at MD = 6073.00)	5700 00	0.00	0.0	5683 67	-194 65	266 93	0.00	330.36			
5800.00 0.00 0.0 5783.67 -194.65 266.93 0.00 330.36 5850.00 0.00 0.0 5833.67 -194.65 266.93 0.00 330.36 5900.00 0.00 0.0 5883.67 -194.65 266.93 0.00 330.36 5950.00 0.00 0.0 5933.67 -194.65 266.93 0.00 330.36 6000.00 0.00 0.0 5983.67 -194.65 266.93 0.00 330.36 6050.00 0.00 0.0 6033.67 -194.65 266.93 0.00 330.36 *** RTD (at MD = 6073.00)	5800.00 0.00 0.0 5783.67 -194.65 266.93 0.00 330.36 5850.00 0.00 0.0 5833.67 -194.65 266.93 0.00 330.36 5900.00 0.00 0.0 5883.67 -194.65 266.93 0.00 330.36 5950.00 0.00 0.0 5933.67 -194.65 266.93 0.00 330.36 6000.00 0.00 0.0 5983.67 -194.65 266.93 0.00 330.36 6050.00 0.00 0.0 6033.67 -194.65 266.93 0.00 330.36 *** RTD (at MD = 6073.00)											
5850.00 0.00 0.0 5833.67 -194.65 266.93 0.00 330.36 5900.00 0.00 0.0 5883.67 -194.65 266.93 0.00 330.36 5950.00 0.00 0.0 5933.67 -194.65 266.93 0.00 330.36 6000.00 0.00 0.0 5983.67 -194.65 266.93 0.00 330.36 6050.00 0.00 0.0 6033.67 -194.65 266.93 0.00 330.36 *** RTD (at MD = 6073.00)	5850.00 0.00 0.0 5833.67 -194.65 266.93 0.00 330.36 5900.00 0.00 0.0 5883.67 -194.65 266.93 0.00 330.36 5950.00 0.00 0.0 5933.67 -194.65 266.93 0.00 330.36 6000.00 0.00 0.0 5983.67 -194.65 266.93 0.00 330.36 6050.00 0.00 0.0 6033.67 -194.65 266.93 0.00 330.36 *** RTD (at MD = 6073.00)											
5900.00 0.00 0.0 5883.67 -194.65 266.93 0.00 330.36  5950.00 0.00 0.0 5933.67 -194.65 266.93 0.00 330.36  6000.00 0.00 0.0 5983.67 -194.65 266.93 0.00 330.36  6050.00 0.00 0.0 6033.67 -194.65 266.93 0.00 330.36  *** RTD (at MD = 6073.00)	5900.00 0.00 0.0 5883.67 -194.65 266.93 0.00 330.36  5950.00 0.00 0.0 5933.67 -194.65 266.93 0.00 330.36  6000.00 0.00 0.0 5983.67 -194.65 266.93 0.00 330.36  6050.00 0.00 0.0 6033.67 -194.65 266.93 0.00 330.36  *** RTD (at MD = 6073.00)											
6000.00 0.00 5983.67 -194.65 266.93 0.00 330.36 6050.00 0.00 0.0 6033.67 -194.65 266.93 0.00 330.36 *** RTD (at MD = 6073.00)	6000.00 0.00 5983.67 -194.65 266.93 0.00 330.36 6050.00 0.00 0.0 6033.67 -194.65 266.93 0.00 330.36 *** RTD (at MD = 6073.00)											
6000.00 0.00 5983.67 -194.65 266.93 0.00 330.36 6050.00 0.00 0.0 6033.67 -194.65 266.93 0.00 330.36 *** RTD (at MD = 6073.00)	6000.00 0.00 5983.67 -194.65 266.93 0.00 330.36 6050.00 0.00 6033.67 -194.65 266.93 0.00 330.36 *** RTD (at MD = 6073.00)	5050 00	0.00	0.0	5033 67		266 03	0.00	330.36			
6050.00 0.00 0.0 6033.67 -194.65 266.93 0.00 330.36 *** RTD (at MD = 6073.00)	6050.00 0.00 0.0 6033.67 -194.65 266.93 0.00 330.36 *** RTD (at MD = 6073.00)											
** RTD (at MD = 6073.00)	** RTD (at MD = 6073.00)											
	· · · · · · · · · · · · · · · · · · ·				0000.07	-134.00	200.33	0.00	000.00			
0.00 0.00 0.0 0000.07 104.00 200.00 0.00 000.00	0.00 0.00 0.00 0.00 0.00 0.000	•			6056 67	-194 65	266 93	0.00	330.36			
		3073.00	0.00	0.0	0030.07	-134.00	200.33	0.00	550.50			





PETROGLYPH OPERATING CO., INC. P.O. BOX 607 ROOSEVELT, UTAH 84066

November 2, 2012

Ms. Diana Mason State of Utah Division of Oil, Gas & Mining 1594 West North Temple, Suite 1210 P.O. Box 145801 Salt Lake City, UT 84114-5801

Re: Directional Drilling R649-3-11

Ute Tribal 12-03-E4: 469' FNL & 1718' FWL, NE/4NW/4, SEC. 12, (Surface Hole)

660' FNL & 1980' FWL, NE/4NW/4, Sec. 12, (Bottom Hole)

T5S, R4W, U.S.B.&M., Duchesne County, Utah

Dear Ms. Mason,

Pursuant to the filing of Petroglyph Operating Co., Inc.'s Application for Permit to Drill regarding the above referenced well on November 2, 2012, we are hereby submitting this letter in accordance with Oil & Gas Conservation Rule R649-3-11 pertaining to the Exception to Location and Siting of Wells.

- The Ute Tribal 08-02-D4 is located within the Antelope Creek Unit Area.
- Petroglyph Operating Co., Inc. is permitting this well as a directional well in order to minimize surface disturbance. Locating the well at the surface location and drilling directionally from this location, Petroglyph Operating Co., Inc. will be able to utilize the existing road and pipelines in the area.
- Furthermore, Petroglyph Operating Co., Inc. hereby certifies that it is the sole working interest owner within 460 feet of the entire directional well bore.

Therefore, based on the above stated information, Petroglyph Operating Co., Inc. requests the permit be granted pursuant to R649-3-11.

Respectfully Submitted,

Ed Trotter, Agent P.O. Box 1910 Vernal, UT 84078 Phone: (435)789,410

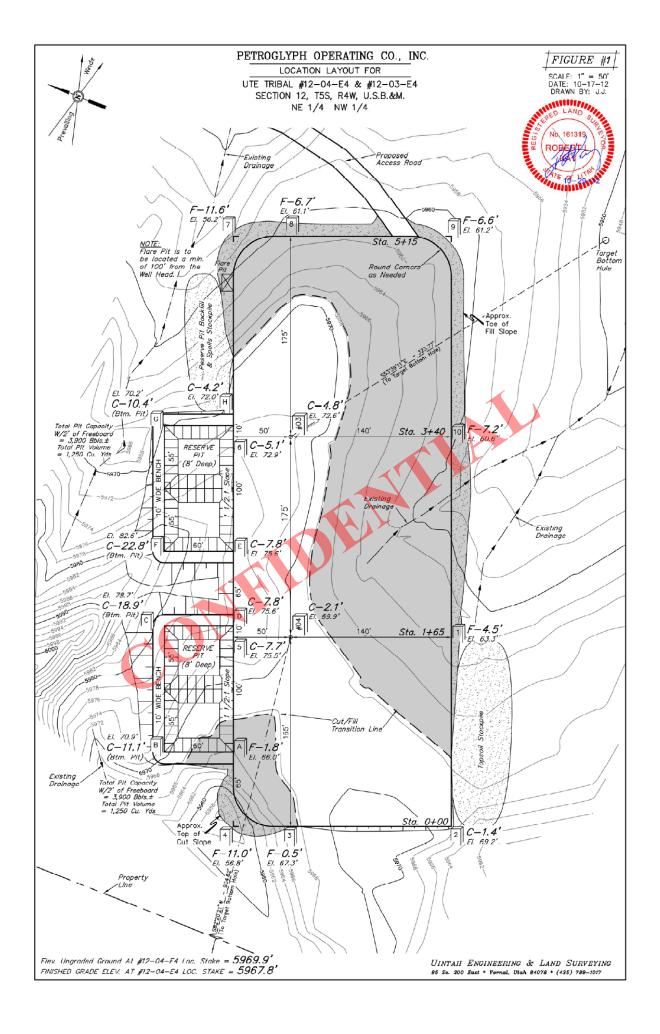
Phone: (435)789-4120 Fax: (435)789-1420

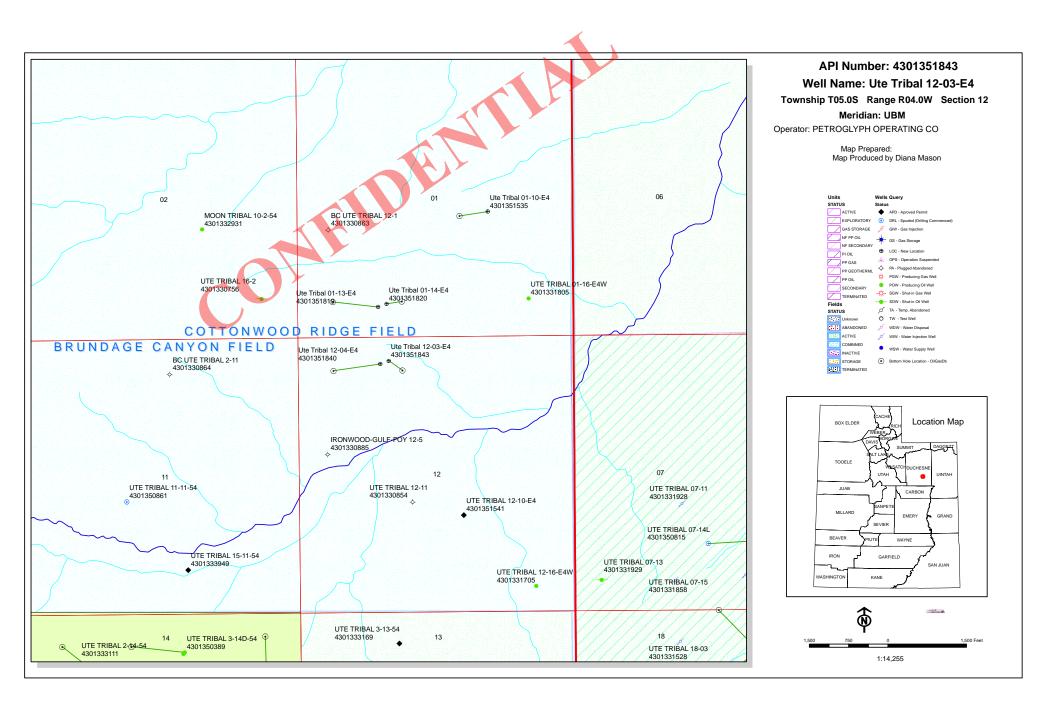
E-mail: edtrotter@easilink.com

#### **Certification**

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drillsite and access route; that I am familiar with the conditions that presently exist; that the statements made in the Plan are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed by Petroglyph Operating Co., Inc. and its contractors and subcontractors in conformity with this Plan and the terms and conditions under which it is approved.

Please be advised that Petroglyph Operating Co., Inc. is considered to be the operator of the UTE TRIBAL 12-03-E4 Well, located in NE/NW of Section 12, T5S, R4W, Duchesne County, Utah, lease #14-20-H62-4744; and is responsible under the terms and conditions of the lease for the operations conducted upon the leased lands. Bond Coverage is provided under Bond #LPM4138153.





# ON-SITE PREDRILL EVALUATION Utah Division of Oil, Gas and Mining

**Operator** PETROGLYPH OPERATING CO

Well Name Ute Tribal 12-03-E4

API Number 43013518430000 APD No 7082 Field/Unit BRUNDAGE CANYON

**Location: 1/4,1/4** NENW Sec 12 Tw 5.0S Rng 4.0W 469 FNL 1718 FWL

GPS Coord (UTM) 560737 4435426 Surface Owner Petroglyph Operating Co., Inc.

#### **Participants**

Rodrigo Jurado & Les Farnsworth (Petroglyph Operating and landowner); Ed Trotter (Land Agent); Bill Civish (BLM); Dennis Ingram (Utah Division of Oil, Gas & Mining)

#### Regional/Local Setting & Topography

The Ute Tribal 12-03-E4 and 12-04-E4 are both proposed on connected locations as directional wells that target the NE/NW and the NW/NW of Section 12, Township 5 South, Range 4 West. This pad is in northeastern Utah on the southern boundary of the Uintah Basin, approximately 9.0 miles south/southwest of the Bridgeland/U.S. Highway 40 junction, along the Antelope Canyon road one mile south of the Antelope/Sowers Canyon Junction. Broad, bench like habitat slopes north from Anthro Mountain into the Uintah Basin, having the lowest elevation at the Duchesne River. These broad benches have numerous drainages that drain the high country northerly, with Sowers Canyon being one of the primary arteries. This well pad is positioned approximately 0.3 miles west of Sowers Canyon along its western rims, in rolling hills with sparse cedar tree habitat and short, desert-like sagebrush country, on a fingered northeast sloping ridge that drops into the canyon below. The greatest cut for the well pad is along the northern portion of the pad, with a shallow draw draining northeasterly; other drainages to the west near the location edge that drains away from the lease.

#### Surface Use Plan

Current Surface Use
Deer Winter Range
Recreational

New Road
Miles

Well Pad

Src Const Material

Surface Formation

0.26 Width 250 Length 515 Onsite UNTA

Ancillary Facilities N

#### Waste Management Plan Adequate?

#### **Environmental Parameters**

Affected Floodplains and/or Wetlands N

#### Flora / Fauna

Sparse vegetation, cedar tree, sagebrush, rabbit brush, bunch grass, prickly pear cactus; mule deer winter range, littered with tracks, elk potential, coyote, rabbit, fox, raptor nest in area, no details.

#### Soil Type and Characteristics

RECEIVED: December 11, 2012

Tan, fine-grained, sandy loam with some clays and shales present

**Erosion Issues** N

Sedimentation Issues N

Site Stability Issues N

**Drainage Diverson Required?** Y

re-route around pad

Berm Required? Y

**Erosion Sedimentation Control Required?** N

Paleo Survey Run? Y Paleo Potental Observed? N Cultural Survey Run? Y Cultural Resources? N

#### Reserve Pit

Site-Specific Factors	Site Ra	anking	
Distance to Groundwater (feet)	>200	0	
Distance to Surface Water (feet)	>1000	0	
Dist. Nearest Municipal Well (ft)	>5280	0	
Distance to Other Wells (feet)		20	
Native Soil Type	Mod permeability	y 10	
Fluid Type	Fresh Water	5	
Drill Cuttings	Normal Rock	0	
Annual Precipitation (inches)		0	
Affected Populations			
Presence Nearby Utility Conduits	Not Present	0	
	Final Score	3 5	1 Sensitivity Level

#### **Characteristics / Requirements**

Two reserve pits positioned immediately off the north side of location in cut, each measuring 60' wide by 110' long by 8' deep while the area shows prevailing winds from the west.

Closed Loop Mud Required? Liner Required? Y Liner Thickness 16 Pit Underlayment Required?

#### Other Observations / Comments

Surface purchased by Petroglyph Operating, no issues.

Dennis Ingram 11/27/2012 **Evaluator Date / Time** 

# Application for Permit to Drill Statement of Basis

## Utah Division of Oil, Gas and Mining

APD No	API WellNo	Status	Well Type	Surf Owner	CBM
7082	43013518430000	LOCKED	OW	P	No
Operator	PETROGLYPH OPERATIN	G CO	Surface Owner-AF	PD Petroglyph Op Co., Inc.	erating
Well Name	Ute Tribal 12-03-E4		Unit		
Field	BRUNDAGE CANYON		Type of Work	DRILL	
Location		U 469 FNL	1718 FWL GPS C	coord	

#### **Geologic Statement of Basis**

The mineral rights for the proposed well are owned by the Ute Tribe. The BLM will be the agency responsible for evaluating and approving the drilling, casing and cement programs.

Brad Hill **APD Evaluator** 

(UTM) 560748E 4435437N

12/10/2012 **Date / Time** 

#### **Surface Statement of Basis**

A presite visit was scheduled and done on Tuesday, November 27, 2012 to take input and address issues regarding the drilling and construction of the Ute Tribal 12-03-E4 and the 12-04-E4 wells on a multi-well pad. Petrolgyph Operating is shown as the landowner of record and was therefore invited to the presite. Rodrigo Jurado came along and represented the landowner interests, and they obviously have a landowner agreement.

Two reserve pits are proposed on this extended, multi-well pad just north of the surface. Both reserve pits are staked immediately off the northern side of the location in cut and provide no issues on stability. However, both pits shall be lined with a minimum 16 mil synthetic liner and a pad if necessary to prevent seepage.

A long, shallow draw drains northerly just north of the location and doesn't provide any issues. Two shallow drainages do head up and begin near the center the location and drain the existing surface to the southeast. Another shallow drainage begins on the western portion of the pad and drains to the west, although none of them should propose a problem once the location is constructed. Both reserve pits shall be prepared for a liner and have a 16 mil or thicker synthetic liner install before the drilling process starts.

The BLM did make note of an existing hawk nest in the area but did not have any details as to how far, or when the nest was last utilized.

Dennis Ingram

Onsite Evaluator

11/27/2012

Date / Time

#### Conditions of Approval / Application for Permit to Drill

Category Condition

Pits A synthetic liner with a minimum thickness of 16 mils shall be properly installed and maintained in

all reserve pits.

Pits The reserve pit should be located on the north side of the location.

Surface The well site shall be bermed to prevent fluids from leaving the pad.

RECEIVED: December 11, 2012

Surface Drainages adjacent to the proposed pad shall be diverted around the location.



#### **WORKSHEET** APPLICATION FOR PERMIT TO DRILL

**APD RECEIVED:** 11/2/2012 API NO. ASSIGNED: 43013518430000

WELL NAME: Ute Tribal 12-03-E4

**OPERATOR:** PETROGLYPH OPERATING CO (N3800) PHONE NUMBER: 435 789-4120

**CONTACT:** Ed Trotter

PROPOSED LOCATION: NENW 12 050S 040W **Permit Tech Review:** 

> SURFACE: 0469 FNL 1718 FWL **Engineering Review:**

> BOTTOM: 0660 FNL 1980 FWL Geology Review:

**COUNTY: DUCHESNE LATITUDE: 40.06701** 

UTM SURF EASTINGS: 560748.00

FIELD NAME: BRUNDAGE CANYON

LEASE TYPE: 2 - Indian **LEASE NUMBER:** 1420H624744

SURFACE OWNER: 4 - Fee

PROPOSED PRODUCING FORMATION(S): GREEN RIVER

**COALBED METHANE: NO** 

LONGITUDE: -110.28764

NORTHINGS: 4435437.00

#### **RECEIVED AND/OR REVIEWED:**

✓ PLAT

Bond: STATE/FEE - LPM4138153

**Potash** 

Oil Shale 190-5

Oil Shale 190-3

Oil Shale 190-13

Water Permit: 43-8342

**RDCC Review:** 

**Fee Surface Agreement** 

Intent to Commingle

**Commingling Approved** 

**LOCATION AND SITING:** 

R649-2-3.

Unit:

R649-3-2. General

R649-3-3. Exception

**Drilling Unit** 

Board Cause No: R649-3-11

**Effective Date:** 

Siting:

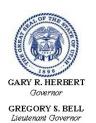
R649-3-11. Directional Drill

Comments: Presite Completed

Stipulations:

4 - Federal Approval - dmason 5 - Statement of Basis - bhill 15 - Directional - dmason

23 - Spacing - dmason



# State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER
Executive Director

Division of Oil, Gas and Mining

JOHN R. BAZA
Division Director

#### Permit To Drill

\*\*\*\*\*\*

Well Name: Ute Tribal 12-03-E4
API Well Number: 43013518430000
Lease Number: 1420H624744
Surface Owner: FEE (PRIVATE)

**Approval Date:** 12/11/2012

#### Issued to:

PETROGLYPH OPERATING CO, 960 Broadway Avenue, Ste 500, Bosie, ID 83703

#### Authority:

Pursuant to Utah Code Ann. 40-6-1 et seq., and Utah Administrative Code R649-3-1 et seq., the Utah Division of Oil, Gas and Mining issues conditions of approval, and permit to drill the listed well. This permit is issued in accordance with the requirements of R649-3-11. The expected producing formation or pool is the GREEN RIVER Formation(s), completion into any other zones will require filing a Sundry Notice (Form 9). Completion and commingling of more than one pool will require approval in accordance with R649-3-22.

#### **Duration:**

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date

#### General:

Compliance with the requirements of Utah Admin. R. 649-1 et seq., the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for permit to drill.

#### **Conditions of Approval:**

State approval of this well does not supercede the required federal approval, which must be obtained prior to drilling.

In accordance with Utah Admin. R.649-3-11, Directional Drilling, the operator shall submit a complete angular deviation and directional survey report to the Division within 30 days following completion of the well.

This proposed well is located in an area for which drilling units (well spacing patterns) have not been established through an order of the Board of Oil, Gas and Mining (the "Board"). In order to avoid the possibility of waste or injury to correlative rights, the operator is requested, once the well has been drilled, completed, and has produced, to analyze geological and engineering data generated therefrom, as well as any similar data from surrounding areas if available. As soon as is practicable after completion of its analysis, and if the analysis suggests an area larger than the quarter-quarter section upon which the well is located is being drained, the operator is requested to seek an appropriate order from the Board

establishing drilling and spacing units in conformance with such analysis by filing a Request for Agency Action with the Board.

Compliance with the Conditions of Approval/Application for Permit to Drill outlined in the Statement of Basis (copy attached).

#### Additional Approvals:

The operator is required to obtain approval from the Division of Oil, Gas and mining before performing any of the following actions during the drilling of this well:

- Any changes to the approved drilling plan contact Dustin Doucet
- Significant plug back of the well contact Dustin Doucet
- Plug and abandonment of the well contact Dustin Doucet

#### **Notification Requirements:**

The operator is required to notify the Division of Oil, Gas and Mining of the following actions during drilling of this well:

• Within 24 hours following the spudding of the well - contact Carol Daniels OR

submit an electronic sundry notice (pre-registration required) via the Utah Oil & Gas website

at http://oilgas.ogm.utah.gov

- 24 hours prior to testing blowout prevention equipment contact Dan Jarvis
- 24 hours prior to cementing or testing casing contact Dan Jarvis
- Within 24 hours of making any emergency changes to the approved drilling program
  - contact Dustin Doucet
- 24 hours prior to commencing operations to plug and abandon the well-contact Dan Jarvis

#### **Contact Information:**

The following are Division of Oil, Gas and Mining contacts and their telephone numbers (please leave a voicemail message if the person is not available to take the call):

- Carol Daniels 801-538-5284 office
- Dustin Doucet 801-538-5281 office

801-733-0983 - after office hours

• Dan Jarvis 801-538-5338 - office

801-231-8956 - after office hours

#### Reporting Requirements:

All reports, forms and submittals as required by the Utah Oil and Gas Conservation General Rules will be promptly filed with the Division of Oil, Gas and Mining, including but not limited to:

- Entity Action Form (Form 6) due within 5 days of spudding the well
- Monthly Status Report (Form 9) due by 5th day of the following calendar month
  - Requests to Change Plans (Form 9) due prior to implementation
  - Written Notice of Emergency Changes (Form 9) due within 5 days
- Notice of Operations Suspension or Resumption (Form 9) due prior to implementation
  - Report of Water Encountered (Form 7) due within 30 days after completion

• Well Completion Report (Form 8) - due within 30 days after completion or plugging

Approved By:

For John Rogers Associate Director, Oil & Gas

	STATE OF UTAH		FORM 9
[	DEPARTMENT OF NATURAL RESOUR DIVISION OF OIL, GAS, AND MI		5.LEASE DESIGNATION AND SERIAL NUMBER: 1420H624744
SUNDR	RY NOTICES AND REPORTS	ON WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME: Ute In
	oposals to drill new wells, significantly reenter plugged wells, or to drill horiz n for such proposals.		7.UNIT or CA AGREEMENT NAME:
1. TYPE OF WELL Oil Well			8. WELL NAME and NUMBER: Ute Tribal 12-03-E4
2. NAME OF OPERATOR: PETROGLYPH OPERATING C	xo		<b>9. API NUMBER:</b> 43013518430000
3. ADDRESS OF OPERATOR: 960 Broadway Avenue, Ste	500 , Boise, ID, 83703	PHONE NUMBER: 208 685-7685 Ext	9. FIELD and POOL or WILDCAT: BRUNDAGE CANYON
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0469 FNL 1718 FWL			COUNTY: DUCHESNE
QTR/QTR, SECTION, TOWNSH	<b>HIP, RANGE, MERIDIAN:</b> 12 Township: 05.0S Range: 04.0W Me	eridian: U	STATE: UTAH
11. CHECI	K APPROPRIATE BOXES TO INDICA	ATE NATURE OF NOTICE, REPOR	T, OR OTHER DATA
TYPE OF SUBMISSION		TYPE OF ACTION	
	ACIDIZE	ALTER CASING	CASING REPAIR
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS	CHANGE TUBING	CHANGE WELL NAME
	CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN	FRACTURE TREAT	NEW CONSTRUCTION
	OPERATOR CHANGE	PLUG AND ABANDON	PLUG BACK
✓ SPUD REPORT	PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION
Date of Spud: 7/31/2013	REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	TEMPORARY ABANDON
7/31/2013	TUBING REPAIR	VENT OR FLARE	WATER DISPOSAL
DRILLING REPORT Report Date:	WATER SHUTOFF	SI TA STATUS EXTENSION	APD EXTENSION
Report Bate.			
	WILDCAT WELL DETERMINATION	OTHER	OTHER:
This well was spud a Bucket Rig (BR 2)	completed operations. Clearly show on 07/31/2013 at approxing provide by Craig's Roustab anducotr. For additional info our staff at (435)722-25	nately 10:00 A.M. Using out Service-Vernal Utah, ormation pleasae contact	Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY July 31, 2013
NAME (PLEASE PRINT) Rodrigo Jurado	<b>PHONE NUM</b> 435 722-5302	BER TITLE Regulatory & Compliance S	pc
SIGNATURE		DATE	•
N/A		7/31/2013	

RECEIVED: Jul. 31, 2013

	STATE OF UTAH		FORM 9			
ı	DEPARTMENT OF NATURAL RESOURCE DIVISION OF OIL, GAS, AND MIN		5.LEASE DESIGNATION AND SERIAL NUMBER: 1420H624744			
SUNDR	Y NOTICES AND REPORTS	ON WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME: Ute In			
	posals to drill new wells, significantly reenter plugged wells, or to drill horizon for such proposals.		7.UNIT or CA AGREEMENT NAME:			
1. TYPE OF WELL Oil Well			8. WELL NAME and NUMBER: Ute Tribal 12-03-E4			
2. NAME OF OPERATOR: PETROGLYPH OPERATING C	;o		9. API NUMBER: 43013518430000			
3. ADDRESS OF OPERATOR: 960 Broadway Avenue, Ste	9. FIELD and POOL or WILDCAT: BRUNDAGE CANYON					
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0469 FNL 1718 FWL			COUNTY: DUCHESNE			
QTR/QTR, SECTION, TOWNSH	tip, RANGE, MERIDIAN: 12 Township: 05.0S Range: 04.0W Meri	dian: U	STATE: UTAH			
11. CHECI	K APPROPRIATE BOXES TO INDICAT	E NATURE OF NOTICE, REPOR	RT, OR OTHER DATA			
TYPE OF SUBMISSION		TYPE OF ACTION				
	ACIDIZE	ALTER CASING	CASING REPAIR			
Approximate date work will start:	✓ CHANGE TO PREVIOUS PLANS	CHANGE TUBING	CHANGE WELL NAME			
8/13/2013	CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE			
SUBSEQUENT REPORT	DEEPEN	FRACTURE TREAT	NEW CONSTRUCTION			
Date of Work Completion:	OPERATOR CHANGE	PLUG AND ABANDON	PLUG BACK			
	PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION			
SPUD REPORT Date of Spud:	REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	TEMPORARY ABANDON			
	UBING REPAIR	VENT OR FLARE	WATER DISPOSAL			
DRILLING REPORT	WATER SHUTOFF	SI TA STATUS EXTENSION	APD EXTENSION			
Report Date:			_			
	WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:			
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.  Petroglyph Operating proposes to deepen the well referenced above to an approximate TVD of 7271' and an approximate MD of 7288'. The well will be drilled according to the approved plan except for the change in depth. Cement volumes will be adjusted accordingly to ensure cement is circulated to surface with appropriate excess.  Approved by the Utah Division of Oil, Gas and Mining  Date: August 14, 2013  By:						
NAME (DI EASE DDINT)	PHONE NUMB	ER  TITLE				
NAME (PLEASE PRINT) Rodrigo Jurado	435 722-5302	Regulatory & Compliance S	рс			
SIGNATURE N/A		<b>DATE</b> 8/6/2013				

### CONFIDENTIAL

# NINE POINT DRILLING PLAN PETROGLYPH OPERATING COMPANY, INC UTE TRIBAL 12-03-E4 NE NW, SEC 12, T5S, R4W DUCHESNE COUNTY, UTAH

#### 1. ESTIMATED TOPS OF IMPORTANT GEOLOGICAL MARKERS:

Formation	Subsea	TVD	MD	
Rig KB=~14' above GGL	5981	0	0	
Surface Formation = <b>Uinta</b>				
Uinta		5967	14	14
Green River		4770	1211	1213
Trona		3440	2541	2550
Mahogany Shale	3290	2691	2701	
"B" Marker	ker _ =		3826	3842
"X" Marker	™ Marker OC ≥			4338
Douglas Creek Marker	Douglas Creek Marker 및 월		4469	4486
"B" Limestone	"X" Marker  Douglas Creek Marker  "B" Limestone  Base Castle Peak Limestone		4866	4883
Base Castle Peak Limestone		570	5411	5428
BSCARB	175	5806	5817	
Wasatch	-90	6071	6071	
Formation at TD: Wasatch	ig TD	-1290	7271	7288

# 2. ESTIMATED DEPTHS OF ANTICIPATED WATER, OIL, GAS OR MINERAL FORMATIONS:

Substance	Formation	Subsea	TVD	MD
Base of moderately saline ground	Uinta	5950	31	31
water*				
Oil/Gas	Douglas Creek	1512	4469	4486
Oil/Gas	Castle Peak	570	5411	5428

Any water encountered during drilling shall be sampled, analyzed and reported to BLM, Vernal office using State of Utah DOGM Form 7 Report of Water Encountered during Drilling. The following analyses shall be performed on any water encountered:

Flow rate (or blowtest) Temperature pH TDS

Dissolved Iron Dissolved Magnesium Dissolved Bicarb. Dissolved Sulfate
Dissolved Calcium Dissolved Sodium Dissolved Carbonate Dissolved Chloride

All depths through the "Base of moderately saline ground water", along with any water encountered below that depth which is less than 10,000 TDS, shall be protected by the surface casing or by lifting the cement of the production casing into the surface casing.

<sup>\*</sup>Base of Moderately Saline Groundwater from Howells, Longson and Hunt, 1981, Utah State Technical Publication 92: The Base of the Moderately Saline Water in the Uinta Basin, Utah



## **CONFIDENTIAL**

# NINE POINT DRILLING PLAN PETROGLYPH OPERATING COMPANY, INC UTE TRIBAL 12-03-E4 NE NW, SEC 12, T5S, R4W DUCHESNE COUNTY, UTAH

#### 3. PROPOSED CASING PROGRAM:

String	Hole	Casing	Top - MD	Bottom - MD	Weight lb/ft	Grade	Thread
Conductor	20"	14"	surface	54'	steel	Cond'r	none
Surface	12-1/4"	8-5/8"	surface	494'	24	J-55	STC
Production	7-7/8"	5-1/2"	surface	7288'	15.5	J-55	LTC

String	Hole	Casing	Collapse	Burst	Tensile
Surface	12-1/4"	8-5/8"	1,370 psi	2,950 psi	244,000 lb
Production	7-7/8"	5-1/2"	4,040 psi	4,810 psi	248,000 lb

- All casing will be new or inspected.
- The surface and production strings shall have a minimum of one (1) centralizer on each of the bottom three (3) joints.
- The production string shall have a minimum of one (1) centralizer for every three (3) joints from TD to the top of the "B" marker at 3842'MD.

#### 4. PROPOSED CEMENTING PROGRAM:

String Top		Cement Description	Sacks	Excess	Weight	Yield
	Bottom	•	Vol (ft³)		(ppg)	(ft³/sk)
Conductor	0 54	Construction Grade Cement	Sufficier	nt volumes	to grout Co	onductor
Cfa a a	0	Class G +2% CaCl2	227	200/	45.0	4 47
Surface	494	+0.25 lb/sk Cello Flake	265	30%	15.8	1.17
Production	0	EXPANDACEM (Class G +additives)	451	200/	12.5	1.92
Lead	3842	+ 1 lb/sk Granulite TR1/4 (LCM)	Ib/sk Granulite TR¼ (LCM)		12.5	1.92
Production	3842	EXPANDACEM (Class G +additives)	532	30%	13.4	1.46
Tail	7288	+ 1 lb/sk Granulite TR¼ (LCM)	776	30%		1.40

- The 8-5/8" surface casing shall be cemented back to surface. In the event that during the primary surface cementing operation the cement does not circulate to surface, or if the cement level should fall back more than 8 feet from surface, then a remedial surface cementing operation shall be performed to insure adequate isolation and stabilization of the surface casing.
- The 5-1/2" production casing shall be cemented back to surface. In the event that during the primary cementing operation the cement does not circulate to surface, a remedial cementing operation shall be performed only if necessary to lift cement above the Trona at 2550'MD.



## **CONFIDENTIAL**

NINE POINT DRILLING PLAN
PETROGLYPH OPERATING COMPANY, INC
UTE TRIBAL 12-03-E4
NE NW, SEC 12, T5S, R4W
DUCHESNE COUNTY, UTAH

#### 5. MINIMUM PRESSURE CONTROL AND SAFETY EQUIPMENT:

- An 8", 2000 PSI, Double Ram BOPE with Hydraulic Closing Unit shall be used.
- A 2000 PSI Working Pressure Annular shall be used.
- The flowline shall have a minimum diameter of 10".
- Auxiliary equipment shall be a Kelly Cock, Bit Float, and a TIW valve with drill pipe threads.
- Spark arrestors shall be equipped on all engine exhausts within 100 feet of the wellbore.
- See attached 2,000 psi BOP schematic diagram.

#### **BOPE TESTING PROCEDURE:**

• The BOPE shall be tested by a professional tester to conform to Onshore Order #2.

#### 6. MUD PROGRAM:

#### A. SURFACE HOLE

- The surface hole will be drilled with an air/mist system from 0' to 494'. All cutting shall be directed to pit.
- A trailer-mounted compressor with a capacity of 2000 CFM will be used. Compressor will have a safety shut-off valve located less than 15 feet from the driller's controls of the rig.
- The rat and mouse holes will be drilled with the air rig after surface casing is cemented.
- The 140 barrel water truck used with the deduster will be the source of kill fluid in the highly unlikely event of pressure being encountered during drilling of the surface hole.
- Operator requests the following variances from Onshore Order 2 part E during drilling of the surface hole. Operator will use air drilling techniques only on surface hole:
  - Operator requests a variance to regulations requiring the blooie line discharge to be 100' from the wellbore. Due to reduced location size, the blooie line discharge will be approximately 75' from the wellbore and securely anchored.
  - Operator requests a variance to regulations requiring an automatic igniter or continuous pilot light on the blooie line. A mister shall be on the end of the blooie line.
  - Operator requests a variance to regulations requiring compressors be located in the opposite direction from the blooie line; a minimum of 100' from the wellbore. Due to the reduced location size, the compressors shall be located as close as is reasonable to the opposite direction from the blooie line and 75' from the wellbore.
  - o Operator requests a variance to regulations requiring a BOPE on the hole when drilling the surface hole. An air bowl shall be utilized on the diverter system in place of a BOPE.



## **CONFIDENTIAL**

NINE POINT DRILLING PLAN
PETROGLYPH OPERATING COMPANY, INC
UTE TRIBAL 12-03-E4
NE NW, SEC 12, T5S, R4W
DUCHESNE COUNTY, UTAH

#### **B. PRODUCTION HOLE**

- The production hole shall be drilled with a freshwater polymer system from 494' to 7288'. LSND mud if conditions warrant.
- Clay inhibition and hole stability shall be achieved with a Diammonium Phosphate (DAP) additive or similar source of clay-stabilizing ions. Anticipated mud weight is 8.3-8.8 lbs/gal. although mud weight up to 10lbs/gal may be used if necessary to prevent wellbore wall instability due to the planned inclination of the well.
- All cuttings and circulating medium shall be directed into the reserve pit. Total Dissolved Solids (TDS) are anticipated to be less than 3000 PPM.
- Sufficient mud inventory will be maintained on location in either tanks or the reserve pit during the drilling of the production hole to handle any adverse conditions that may arise.
- If necessary to control formation fluids or pressure, the system will be weighted with the addition of bentonite gel, and if pressure conditions warrant, with barite. Enough material shall be maintained on location to allow for the mudweight to be raised to 10.5 lbs/gal should need arise.
- During drilling operations, pit levels and flow from the well shall be monitored by instrumentation to include at least: a pit volume totalizer (PVT), a stroke counter, and a mud-flow indicator.
- A mud-gas separator shall be available on location.

#### C. HAZARDOUS MATERIALS AND POLLUTANTS

- Chromate additives **shall NOT** be used in the mud system on Indian lands without prior DOGM approval to ensure adequate protection of freshwater aquifers.
- Chemicals subject to reporting under SARA Title III in an amounts equal to or greater than 10,000 pounds annually **shall NOT** be used, produced, stored, transported, or disposed of in association with the drilling, testing, or completion of this well.
- Extremely hazardous substances, as defined in 40 CFR 355, in threshold planning quantities shall NOT be used, produced, stored, transported, or disposed of in association with the drilling, testing, or completion of this well.
- Hazardous substances specifically listed by the EPA as a hazardous waste, as defined in 40 CFR 261 (D), or any substances that through their use would lead to the generation of a hazardous waste, **shall NOT** be used in association with the drilling, testing, or completion of this well.



## **CONFIDENTIAL**

# NINE POINT DRILLING PLAN PETROGLYPH OPERATING COMPANY, INC UTE TRIBAL 12-03-E4 NE NW, SEC 12, T5S, R4W DUCHESNE COUNTY, UTAH

#### 7. EVALUATION PROGRAM:

Logs: Triple Combo TD to base of surface casing (AIT, DSN, CDL)

Base of surface casing to surface (GR only)

Cores: None planned

DST: None planned

Testing: Operator plans no testing until the completion phase of the well.

#### 8. ANTICIPATED ABNORMAL PRESSURE OR TEMPERATURE:

- Operator anticipates Bottom Hole Temperatures below 150°F, the maximum temperature for DAP drilling fluids.
- No H<sub>2</sub>S has been encountered or is known to exist from previous drilling in the area at this depth.
- Maximum pressure for hydrocarbon bearing zones at native conditions in this area is approximately 1822 PSI (0.25 PSI/ft gradient).
- This well is NOT in the vicinity of active injection wells. Nearby active injection can cause pressures up to a 0.433 PSI/ft gradient.

#### 9. <u>DIRECTIONAL WELL PLAN:</u>

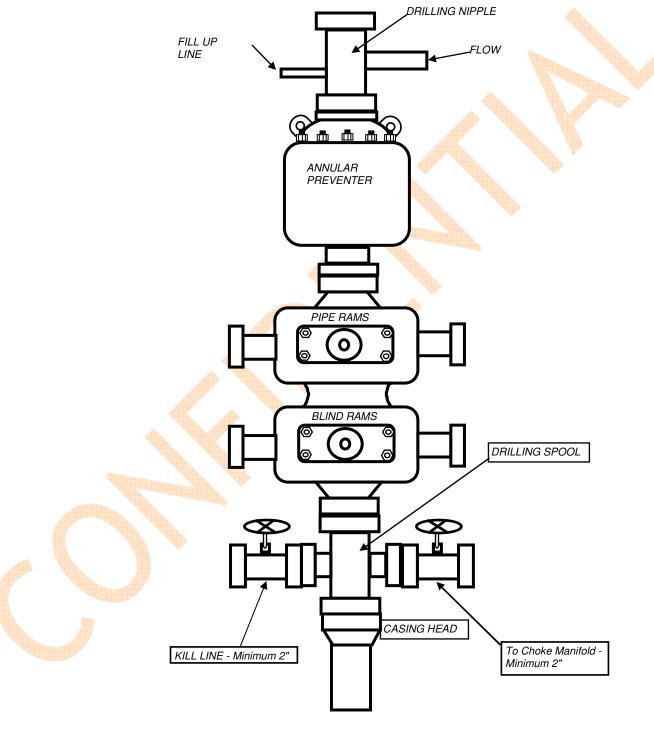
- Well shall be drilled directionally in order to limit surface disturbance.
- A Positive Displacement Motor with a bent sub of 1.25° to 1.75° will be used to control well path.
- A directional survey shall be taken at least one (1) time per 100' of drilling.
- Anti-collision equipment will not be used as there are no existing wells in the vicinity of the proposed well path.
- While cutting the Waterflood Unit Interval from 3842' to 5817', the actual well path may be allowed to vary up to 100' horizontally from plan in order to prevent excessive slide drilling. Above and below the Waterflood Unit Interval, variances in excess 100' horizontally from plan may be allowed.
- Directional drilling plan is attached.



# **CONFIDENTIAL**

NINE POINT DRILLING PLAN
PETROGLYPH OPERATING COMPANY, INC
UTE TRIBAL 12-03-E4
NE NW, SEC 12, T5S, R4W
DUCHESNE COUNTY, UTAH

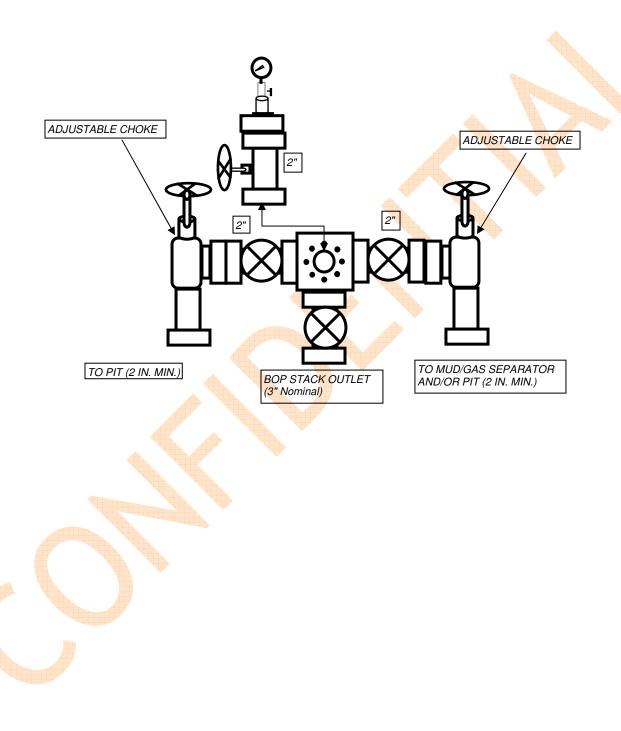
# TYPICAL 2,000 p.s.i. BLOWOUT PREVENTER

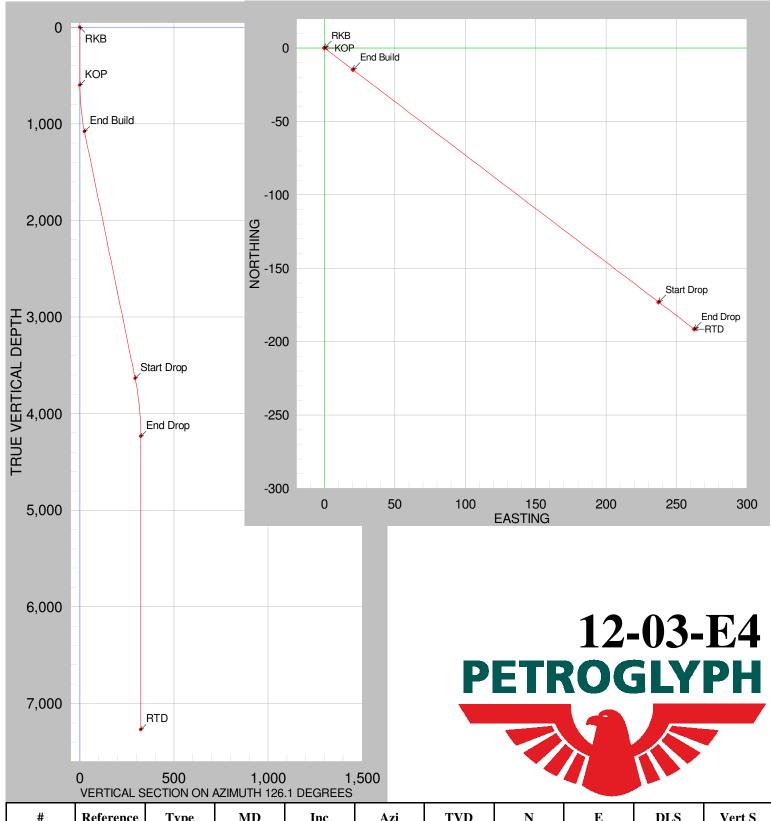




# **CONFIDENTIAL**

NINE POINT DRILLING PLAN
PETROGLYPH OPERATING COMPANY, INC
UTE TRIBAL 12-03-E4
NE NW, SEC 12, T5S, R4W
DUCHESNE COUNTY, UTAH
TYPICAL 2,000 p.s.i. CHOKE MANIFOLD





#	Reference	Туре	MD	Inc	Azi	TVD	N	E	DLS	Vert S
0	RKB	Tie Point	0.00	0.00	0.00	0.00	0.00	0.00		0.00
1	КОР	Vertical	600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00
2	End Build	Build	1080.00	6.00	126.10	1079.12	-14.79	20.29	1.25	25.11
3	Start Drop	Tangent	3650.00	6.00	126.10	3635.04	-173.08	237.35	0.00	293.75
4	End Drop	Drop	4250.00	0.00	0.00	4233.95	-191.57	262.71	1.00	325.14
5	RTD	Vertical	7288.00	0.00	0.00	7271.95	-191.57	262.71	0.00	325.14

RECEIVED: Aug. 06, 2013

SES - Stoner Engineering Software

				11	2-03-E4,	Dlan 1				
Oneveter	Dotroalimb				feet, %100ft	, riali i	10.3	1 Monday Aver	0F 2012 D-	1 64 5
Field Well Name	Petroglyph 12-03-E4				Duchesne		Vertic	21 Monday, August cal Section Azimuth Calculation Method	126.1	
Plan	1			Country	USA			Database	Access	
		IL 1718' FV	VL 12-5s-4w			MapZone		Lat Long		
Si Slot Nam			UWI			SurfaceX SurfaceY		Surface L Surface	•	
Well Number			API			Z Datum		Surface	: Lat	
Proje			7			Surface Z		Ground L	evel	
DIRECTIONA	AL WELL P	LAN								
MD*	INC*	AZI*	TVD*	N*	E*	DLS*	V. S.*	MapE*	MapN* Sys	TVD*
ft	deg	deg	ft	ft	ft	%100ft	ft	ft	ft	ft
*** RKB (at	t MD = 0.0	10)								
0.00	0.00	0.0	0.00	0.00	0.00		0.00			
50.00	0.00	0.0	50.00	0.00	0.00	0.00	0.00			
100.00	0.00	0.0	100.00	0.00	0.00	0.00	0.00			
150.00	0.00	0.0	150.00	0.00	0.00	0.00	0.00			
200.00	0.00	0.0	200.00	0.00	0.00	0.00	0.00			
250.00	0.00	0.0	250.00	0.00	0.00	0.00	0.00			
300.00	0.00	0.0	300.00	0.00	0.00	0.00	0.00			
350.00	0.00	0.0	350.00	0.00	0.00	0.00	0.00			
400.00	0.00	0.0	400.00	0.00	0.00	0.00	0.00			
450.00	0.00	0.0	450.00	0.00	0.00	0.00	0.00			
100.00	0.00	0.0	100.00	0.00	0.00	0.00	0.00			
500.00	0.00	0.0	500.00	0.00	0.00	0.00	0.00			
550.00	0.00	0.0	550.00	0.00	0.00	0.00	0.00			
*** KOP (at		•								
600.00	0.00	0.0	600.00	0.00	0.00	0.00	0.00			
650.00	0.63	126.1	650.00	-0.16	0.22	1.25	0.27			
700.00	1.25	126.1	699.99	-0.64	0.88	1.25	1.09			
750.00	1.88	126.1	749.97	-1.45	1.98	1.25	2.45			
800.00	2.50	126.1	799.94	-2.57	3.53	1.25	4.36			
850.00	3.13	126.1	849.88	-4.02	5.51	1.25	6.82			
900.00	3.75	126.1	899.79	-5.78	7.93	1.25	9.81			
950.00	4.38	126.1	949.66	-7.87	10.79	1.25	13.36			
1000.00	5.00	106.1	999.49	10.00	14.09	1.05	17.44			
1000.00 1050.00	5.63	126.1 126.1		-10.28 -13.00	17.83	1.25 1.25	17. <del>44</del> 22.07			
*** END BU			1049.28	-13.00	17.03	1.23	ZZ.U1			
1080.00	6.00	126.1	1079.12	-14.79	20.29	1.25	25.11			
1100.00	6.00	126.1	1099.01	-16.03	21.98	0.00	27.20			
1150.00	6.00	126.1	1148.74	-19.11	26.20	0.00	32.43			
1200.00	6.00	126.1	1198.47	-22.19	30.42	0.00	37.65			
1250.00	6.00	126.1	1248.19	-25.26	34.65	0.00	42.88			
1300.00	6.00	126.1	1297.92	-28.34	38.87	0.00	48.11			
1350.00	6.00	126.1	1347.64	-31.42	43.09	0.00	53.33			
1400.00	6.00	126.1	1397.37	-34.50	47.32	0.00	58.56			
1450.00	6.00	126.1	1447.10	-37.58	51.54	0.00	63.79			
1500.00	6.00	126.1	1496.82	-40.66	55.76	0.00	69.01			
1550.00	6.00	126.1	1546.55	-43.74	59.98	0.00	74.24			

SES - Stoner Engineering Software

				12	2-03-E4,	Plan <sup>-</sup>	1			
Operator Field Well Name Plan							Vertic	21 Monday, August cal Section Azimuth Calculation Method Database	126.1 Minimum Curvati	
Locatio Si Slot Nam Well Numbo Proje	te ne er	IL 1718' F\	VL 12-5s-4w UWI API			MapZon Surface Surface Z Datur Surface	X Y n	Lat Long Surface L Surface Ground L	ong Lat	
DIRECTIONA	AL WELL P	LAN								
MD*	INC*	AZI*	TVD*	N*	E*	DLS*	V. S.*	MapE*	MapN* Sys	TVD*
ft	deg	deg	ft	ft	ft	%100ft	ft	ft	ft	ft
1600.00	6.00	126.1	1596.27	-46.82	64.21	0.00	79.46			
1650.00	6.00	126.1	1646.00	-49.90	68.43	0.00	84.69			
1700.00	6.00	126.1	1695.73	-52.98	72.65	0.00	89.92			
1750.00	6.00	126.1	1745.45	-56.06	76.88	0.00	95.14			
1800.00	6.00	126.1	1795.18	-59.14	81.10	0.00	100.37			
1850.00	6.00	126.1	1844.91	-62.22	85.32	0.00	105.60			
1900.00	6.00	126.1	1894.63	-65.30	89.54	0.00	110.82			
1050.00	0.00	100.1	1011.00	00.00	00.77	0.00	440.05			
1950.00	6.00	126.1	1944.36	-68.38	93.77	0.00	116.05			
2000.00	6.00	126.1	1994.08	-71.46	97.99	0.00	121.28			
2050.00	6.00	126.1	2043.81	-74.53	102.21	0.00	126.50			
2100.00	6.00	126.1	2093.54	-77.61	106.44	0.00	131.73			
2150.00	6.00	126.1	2143.26	-80.69	110.66	0.00	136.96			
2200.00	6.00	126.1	2192.99	-83.77	114.88	0.00	142.18			
2250.00	6.00	126.1	2242.71	-86.85	119.10	0.00	147.41			
2300.00	6.00	126.1	2292.44	-89.93	123.33	0.00	152.63			
2350.00	6.00	126.1	2342.17	-93.01	127.55	0.00	157.86			
2400.00	6.00	126.1	2391.89	-96.09	131.77	0.00	163.09			
2450.00	6.00	126.1	2441.62	-99.17	136.00	0.00	168.31			
2500.00	6.00	126.1	2491.34	-102.25	140.22	0.00	173.54			
2550.00	6.00	126.1	2541.07	-105.33	144.44	0.00	178.77			
2600.00	6.00	126.1	2590.80	-108.41	148.66	0.00	183.99			
2650.00	6.00	126.1	2640.52	-111.49	152.89	0.00	189.22			
2700.00	6.00	126.1	2690.25	-114.57	157.11	0.00	194.45			
2700.00 2750.00	6.00	126.1	2690.25	-114.57	161.33	0.00	194.45			
2800.00	6.00	126.1	2739.97 2789.70	-117.65	165.56	0.00	204.90			
2850.00	6.00	126.1	2839.43	-120.73	169.78	0.00	204.90			
2900.00	6.00	126.1	2889.15	-123.81	174.00	0.00	210.13			
2300.00	0.00	120.1	2003.13	-120.00	174.00	0.00	210.00			
2950.00	6.00	126.1	2938.88	-129.96	178.22	0.00	220.58			
3000.00	6.00	126.1	2988.61	-133.04	182.45	0.00	225.80			
3050.00	6.00	126.1	3038.33	-136.12	186.67	0.00	231.03			
3100.00	6.00	126.1	3088.06	-139.20	190.89	0.00	236.26			
3150.00	6.00	126.1	3137.78	-142.28	195.12	0.00	241.48			
3200.00	6.00	126.1	3187.51	-145.36	199.34	0.00	246.71			
3250.00	6.00	126.1	3237.24	-148.44	203.56	0.00	251.94			
3300.00	6.00	126.1	3286.96	-151.52	207.79	0.00	257.16			

SES - Stoner Engineering Software

_											
_	rotor	Petroglyph				feet, %100ft	, Plan 1	10.7	1 Manday August	OF 2012 Page	2 of E
F	Field	reliogiypii				Duchesne			21 Monday, August cal Section Azimuth		3 01 3
Well N	lame	12-03-E4			State			Survey	Calculation Method	Minimum Curvatu	re
	Plan	1			Country	USA			Database	Access	
Lo	ocatio	n 469' FN	L 1718' FV	VL 12-5s-4w			MapZone		Lat Long	, Ref	
	Sit	е					SurfaceX		Surface L	ong	
	t Nam			UWI			SurfaceY		Surface	e Lat	
Well N				API			Z Datum				
	Projec	et					Surface Z		Ground L	.evel	
DIRECT	TIONA	L WELL PI	-AN								
MI	D*	INC*	AZI*	TVD*	N*	E*	DLS*	V. S.*	MapE*	MapN* Sys	TVD*
	ft	deg	deg	ft	ft	ft	%100ft	ft	ft	ft	ft
3350.	.00	6.00	126.1	3336.69	-154.60	212.01	0.00	262.39			
3400.	.00	6.00	126.1	3386.41	-157.68	216.23	0.00	267.62			
3450.	.00	6.00	126.1	3436.14	-160.76	220.45	0.00	272.84			
3500.		6.00	126.1	3485.87	-163.84	224.68	0.00	278.07			
3550.		6.00	126.1	3535.59	-166.92	228.90	0.00	283.30			
3600.		6.00	126.1	3585.32	-170.00	233.12	0.00	288.52			
		ROP (at N									
3650.		6.00	126.1	3635.04	-173.08	237.35	0.00	293.75			
3700.	.00	5.50	126.1	3684.79	-176.03	241.39	1.00	298.76			
3750.		5.00	126.1	3734.58	-178.72	245.09	1.00	303.33			
3800.		4.50	126.1	3784.41	-181.16	248.43	1.00	307.47			
3850.		4.00	126.1	3834.27	-183.35	251.43	1.00	311.18			
3900.	.00	3.50	126.1	3884.17	-185.27	254.07	1.00	314.45			
3950.	.00	3.00	126.1	3934.09	-186.94	256.36	1.00	317.28			
4000.		2.50	126.1	3984.03	-188.36	258.30	1.00	319.68			
4050.		2.00	126.1	4033.99	-189.51	259.89	1.00	321.64			
4100.		1.50	126.1	4083.97	-190.41	261.12	1.00	323.17			
4150.		1.00	126.1	4133.95	-191.05	262.00	1.00	324.26			
4200.	.00	0.50	126.1	4183.95	-191.44	262.53	1.00	324.92			
*** END			= 4250.								
4250.	.00	0.00	0.0	4233.95	-191.57	262.71	1.00	325.14			
4300.	.00	0.00	0.0	4283.95	-191.57	262.71	0.00	325.14			
4350.	.00	0.00	0.0	4333.95	-191.57	262.71	0.00	325.14			
4400.	.00	0.00	0.0	4383.95	-191.57	262.71	0.00	325.14			
4450.	.00	0.00	0.0	4433.95	-191.57	262.71	0.00	325.14			
4500.	.00	0.00	0.0	4483.95	-191.57	262.71	0.00	325.14			
4550.	.00	0.00	0.0	4533.95	-191.57	262.71	0.00	325.14			
4600.		0.00	0.0	4583.95	-191.57	262.71	0.00	325.14			
4650.	.00	0.00	0.0	4633.95	-191.57	262.71	0.00	325.14			
4700.	.00	0.00	0.0	4683.95	-191.57	262.71	0.00	325.14			
4750.	.00	0.00	0.0	4733.95	-191.57	262.71	0.00	325.14			
4800.	.00	0.00	0.0	4783.95	-191.57	262.71	0.00	325.14			
4850.	.00	0.00	0.0	4833.95	-191.57	262.71	0.00	325.14			
4900.	.00	0.00	0.0	4883.95	-191.57	262.71	0.00	325.14			
4950.	.00	0.00	0.0	4933.95	-191.57	262.71	0.00	325.14			

SES - Stoner Engineering Software

				1:	2-03-E4	, Plan 1				
Operator Field Well Name Plan							Vertic	21 Monday, August cal Section Azimuth Calculation Method Database	126.1 Minimum Curvatu	
Locatio Si Slot Nam Well Numbo Proje	ne er	L 1718' FV	VL 12-5s-4w UWI API			MapZone SurfaceX SurfaceY Z Datum Surface Z	( ,	Lat Long Surface L Surface Ground L	ong e Lat	
DIRECTION	AL WELL PL	.AN								
MD*	INC*	AZI*	TVD*	N*	E*	DLS*	V. S.*	MapE*	MapN* Sys	TVD*
ft	deg	deg	ft	ft	ft	%100ft	ft	ft	ft	ft
5000.00	0.00	0.0	4983.95	-191.57	262.71	0.00	325.14			
5050.00	0.00	0.0	5033.95	-191.57	262.71	0.00	325.14			
5100.00	0.00	0.0	5083.95	-191.57	262.71	0.00	325.14			
5150.00	0.00	0.0	5133.95	-191.57	262.71	0.00	325.14			
2.00.00	0.00	0.0	0.00.00	.01.07		3.00	J_J			
5200.00	0.00	0.0	5183.95	-191.57	262.71	0.00	325.14			
5250.00	0.00	0.0	5233.95	-191.57	262.71	0.00	325.14			
5300.00	0.00	0.0	5283.95	-191.57	262.71	0.00	325.14			
5350.00	0.00	0.0	5333.95	-191.57	262.71	0.00	325.14			
	0.00		5383.95	-191.57	262.71		325.14			
5400.00	0.00	0.0	5565.95	-191.57	202.71	0.00	323.14			
5450.00	0.00	0.0	5433.95	-191.57	262.71	0.00	325.14			
5500.00	0.00	0.0	5483.95	-191.57	262.71	0.00	325.14			
	0.00		5533.95	-191.57			325.14			
5550.00		0.0			262.71	0.00				
5600.00	0.00	0.0	5583.95	-191.57	262.71	0.00	325.14			
5650.00	0.00	0.0	5633.95	-191.57	262.71	0.00	325.14			
5700.00	0.00	0.0	5683.95	-191.57	262.71	0.00	325.14			
5750.00	0.00		5733.95		262.71		325.14			
		0.0		-191.57		0.00				
5800.00	0.00	0.0	5783.95	-191.57	262.71	0.00	325.14			
5850.00	0.00	0.0	5833.95	-191.57	262.71	0.00	325.14			
5900.00	0.00	0.0	5883.95	-191.57	262.71	0.00	325.14			
5050.00	0.00	0.0	E022 0E	101 57	260.74	0.00	205 14			
5950.00	0.00	0.0	5933.95	-191.57	262.71	0.00	325.14			
6000.00	0.00	0.0	5983.95	-191.57	262.71	0.00	325.14			
6050.00	0.00	0.0	6033.95	-191.57	262.71	0.00	325.14			
6100.00	0.00	0.0	6083.95	-191.57	262.71	0.00	325.14			
6150.00	0.00	0.0	6133.95	-191.57	262.71	0.00	325.14			
6000.00	0.00	0.0	6100.05	101.57	060.74	0.00	20E 14			
6200.00	0.00	0.0	6183.95	-191.57	262.71	0.00	325.14			
6250.00	0.00	0.0	6233.95	-191.57	262.71	0.00	325.14			
6300.00	0.00	0.0	6283.95	-191.57	262.71	0.00	325.14			
6350.00	0.00	0.0	6333.95	-191.57	262.71	0.00	325.14			
6400.00	0.00	0.0	6383.95	-191.57	262.71	0.00	325.14			
0450.00	0.00	0.0	0400.05	101 57	000 74	0.00	005 4 4			
6450.00	0.00	0.0	6433.95	-191.57	262.71	0.00	325.14			
6500.00	0.00	0.0	6483.95	-191.57	262.71	0.00	325.14			
6550.00	0.00	0.0	6533.95	-191.57	262.71	0.00	325.14			
6600.00	0.00	0.0	6583.95	-191.57	262.71	0.00	325.14			
6650.00	0.00	0.0	6633.95	-191.57	262.71	0.00	325.14			
6700.00	0.00	0.0	6683.95	-191.57	262.71	0.00	325.14			

SES - Stoner Engineering Software

				12	2-03-E4	, Plan	1			
Operator	Petroglyph			Units	feet, %100ft		10:2	1 Monday, Augus	st 05, 2013 Pag	ge 5 of 5
Field				County	Duchesne		Vertic	al Section Azimut	<b>h</b> 126.1	
Well Name	12-03-E4			State	UT		Survey (	Calculation Metho	d Minimum Curv	ature
Plan	1			Country	USA			Databas	e Access	
Locatio	n 469' FN	L 1718' FV	NL 12-5s-4w			MapZor	ne	Lat Lor	ng Ref	
Si	te					Surface	×X	Surface	Long	
Slot Nam	ne		UWI			Surface	Υ	Surfa	ce Lat	
Well Numb	er		API			Z Datu				
Proje	ct					Surface	Z	Ground	Level	
DIRECTION	AL WELL P	LAN								
MD*	INC*	AZI*	TVD*	N*	E*	DLS*	V. S.*	MapE*	MapN* Sy	/sTVD
ft	deg	deg	ft	ft	ft	%100ft	ft	ft	ft	1
6750.00	0.00	0.0	6733.95	-191.57	262.71	0.00	325.14			
6800.00	0.00	0.0	6783.95	-191.57	262.71	0.00	325.14			
6850.00	0.00	0.0	6833.95	-191.57	262.71	0.00	325.14			
6900.00	0.00	0.0	6883.95	-191.57	262.71	0.00	325.14			
6950.00	0.00	0.0	6933.95	-191.57	262.71	0.00	325.14			
7000.00	0.00	0.0	6983.95	-191.57	262.71	0.00	325.14			
7050.00	0.00	0.0	7033.95	-191.57	262.71	0.00	325.14			
7100.00	0.00	0.0	7083.95	-191.57	262.71	0.00	325.14			
7150.00	0.00	0.0	7133.95	-191.57	262.71	0.00	325.14			
7200.00	0.00	0.0	7183.95	-191.57	262.71	0.00	325.14			
	0.00	0.0	7233.95	-191.57	262.71	0.00	325.14			
7250.00										
7250.00 *** RTD (at	: MD = 728	38.00)								

## RECEIVED

FORM APPROVED OMB No. 1004-0136 Expires July 31, 2010

#### **UNITED STATES** DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

NOV 0 3 2012 5. Lease Serial No. 1420H624744

		11201102-17 1-1
APPLICATION FOR PERMIT	TO DRILL OR REENTER BLM	6. If Indian, Allottee or Tribe Name UINTAH AND OURAY
Ia. Type of Work: DRILL REENTER	CONFIDENTIAL	7. If Unit or CA Agreement, Name and No. 1420H624650
1b. Type of Well: ☑ Oil Well ☐ Gas Well ☐ Otl	ner Single Zone  Multiple Zone	8. Lease Name and Well No. UTE TRIBAL 12-03-E4
2. Name of Operator Contact: PETROGLYPH OPERATING CO INDMail: edtrotter	ED H TROTTER	9. API Well No.
3à. Address	3b. Phone No. (include area code)	43013 5 18 43  10. Field and Pool, or Exploratory
ROOSEVELT, UT 84066	Ph: 435-789-4120 Fx: 435-789-1420	ANTELOPE CREEK
4. Location of Well (Report location clearly and in accorded	ance with any State requirements.*)	11. Sec., T., R., M., or Blk. and Survey or Area
At surface NENW 469FNL 1718FWL	40.066875 N Lat, 110.287756 W Lon	Sec 12 T5S R4W Mer UBM
At proposed prod. zone NENW 660FNL 1980FWL	40.066347 N Lat, 110.286825 W Lon	SME: FEE
14. Distance in miles and direction from nearest town or post 16.89 MILES SOUTHWEST OF MYTON, UTAH	office*	12. County or Parish 13. State DUCHESNE UT
15. Distance from proposed location to nearest property or lease line, ft. (Also to nearest drig, unit line, if any)	16. No. of Acres in Lease	17. Spacing Unit dedicated to this well
469	480.00	
18. Distance from proposed location to nearest well, drilling,	19. Proposed Depth	20. BLM/BIA Bond No. on file
completed, applied for, on this lease, ft. 2142	6073 MD 6056 TVD	LPM4138335
21. Elevations (Show whether DF, KB, RT, GL, etc. 5968 GL	22. Approximate date work will start 01/15/2013	23. Estimated duration 45 DAYS
	24. Attachments	
The following, completed in accordance with the requirements of	Onshore Oil and Gas Order No. 1, shall be attached to t	his form:
Well plat certified by a registered surveyor.	4. Bond to cover the operation	ns unless covered by an existing bond on file (see
<ol> <li>A Drilling Plan.</li> <li>A Surface Use Plan (if the location is on National Forest Syste SUPO shall be filed with the appropriate Forest Service Offi</li> </ol>	Item 20 above).  5. Operator certification 6. Such other site specific infi authorized officer.	ormation and/or plans as may be required by the
25. Signature (Electronic Submission)	Name (Printed/Typed) LESTER FARNSWORTH Ph: 435-722-2	Date 14/02/2012
Title	22072177111100001177 711. 400-722-2	2531 11/02/2012
DISTRICT MANAGER		
Approved by (Signature)	Name (Printed/Typed)  Jerry Kenczki	a JUL 2 5 2013
Title Manager Lands & Mineral Resources	Office	
Application approval does not warrant or certify the applicant holoperations thereon.  Conditions of approval, if any, are attached.	CONDITIONS	OF APPROVAL ATTACHED
Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, m States any false, fictitious or fraudulent statements or representation	ake it a crime for any person knowingly and willfully to ons as to any matter within its jurisdiction.	make to any department or as TECEIVED
Additional Operator Remarks (see next page)		JUL 3 0 2013

Electronic Submission #157721 verified by the BLM Well Information System For PETROGLYPH OPERATING CO INC, sent to the Vernal Committed to AFMSS for processing by JOHNETTA MAGEE on 11/13/2012 (13JM078§) DIV. OF OIL, GAS & MINING

OTICE OF APPROVAL



# UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT VERNAL FIELD OFFICE

VERNAL, UT 84078

(435) 781-4400



#### CONDITIONS OF APPROVAL FOR APPLICATION FOR PERMIT TO DRILL

Company: Well No:

PETROGLYPH OPERATING CO.

**UTE TRIBAL 12-03-E4** 

API No: 43-013-51843

Location: Lease No: NENW, Sec. 12, T5S, R4W

14-20-H62-4744

Agreement: N/A

**OFFICE NUMBER:** 

(435) 781-4400

**OFFICE FAX NUMBER:** 

(435) 781-3420

## A COPY OF THESE CONDITIONS SHALL BE FURNISHED TO YOUR FIELD REPRESENTATIVE TO INSURE COMPLIANCE

All lease and/or unit operations are to be conducted in such a manner that full compliance is made with the applicable laws, regulations (43 CFR Part 3160), and this approved Application for Permit to Drill including Surface and Downhole Conditions of Approval. The operator is considered fully responsible for the actions of his subcontractors. A copy of the approved APD must be on location during construction, drilling, and completion operations. This permit is approved for a two (2) year period, or until lease expiration, whichever occurs first. An additional extension, up to two (2) years, may be applied for by sundry notice prior to expiration.

#### **NOTIFICATION REQUIREMENTS**

Construction Activity (Notify Ute Tribe Energy & Minerals Dept. and BLM Environmental Scientist)	-	The Ute Tribe Energy & Minerals Dept. and BLM Environmental Scientist shall be notified at least 48 hours in advance of any construction activity. The Ute Tribal office is open Monday through Thursday.
Construction Completion (Notify Ute Tribe Energy & Minerals Dept. and BLM Environmental Scientist)		Upon completion of the pertinent APD/ROW construction, notify the Ute Tribe Energy & Minerals Dept. for a Tribal Technician to verify the Affidavit of Completion. Notify the BLM Environmental Scientist prior to moving on the drilling rig.
Spud Notice (Notify BLM Petroleum Engineer)	-	Twenty-Four (24) hours prior to spudding the well.
Casing String & Cementing (Notify BLM Supv. Petroleum Tech.)	-	Twenty-Four (24) hours prior to running casing and cementing all casing strings to: blm_ut_vn_opreport@blm.gov.
BOP & Related Equipment Tests (Notify BLM Supv. Petroleum Tech.)	-	Twenty-Four (24) hours prior to initiating pressure tests.
First Production Notice (Notify BLM Petroleum Engineer)	-	Within Five (5) business days after new well begins or production resumes after well has been off production for more than ninety (90) days.

#### SURFACE USE PROGRAM CONDITIONS OF APPROVAL (COAs)

- Any deviation of submitted APD's, which includes Petroglyph's surface use plan, and the
  operator will notify the BLM in writing and will receive written authorization of any such change
  with appropriate authorization.
- All operator employees and/or authorized personnel (sub-contractors) in the field will have approved applicable APD's, and COA authorizations on their person(s) during all phases of construction.
- All vehicular traffic, personnel movement, construction/restoration operations should be confined to the area examined and approved, and to the existing roadways and/or evaluated access routes.
- The Authorized Officer from the BLM will be notified should cultural remains from subsurface deposits be exposed or identified during construction. All construction will cease until resources can be identified and protected properly.
- Production facilities would be painted Covert Green for the 12-03-E4 to blend in with the surrounding habitat, unless otherwise stated from the private land owner agreement.
- Site reclamation would be accomplished for portions of the well pad not needed for production, within 6 months of completion, weather permitting. This also includes any roads, and pipeline areas that have been disturbed as well. Roads and pipeline disturbances can undergo reclamation immediately after the pipeline is installed and after the roads are built. Please contact surface owner or the BLM AO for possible seed mixes to use in the project area. Nonnatives can be used; however lbs/ac must be kept low to minimize the chance of a monoculture.
- The pad locations will be recontoured and planted in native vegetation as per the land owner's request.

#### DOWNHOLE PROGRAM CONDITIONS OF APPROVAL (COAs)

#### SITE SPECIFIC DOWNHOLE COAs:

- Gamma Ray Log shall be run from Total Depth to Surface
- CBL will be run from TD to TOC.
- Cement for the surface casing will be circulated to the surface.
- Cement for long-string shall be circulated 200' above surface casing shoe.

#### Variance Granted

Variance for Air-drilling is granted per

All provisions outlined in Onshore Oil & Gas Order #2 Drilling Operations shall be strictly adhered to. The following items are emphasized:

#### DRILLING/COMPLETION/PRODUCING OPERATING STANDARDS

- The spud date and time shall be reported orally to Vernal Field Office within 24 hours of spudding.
- Notify Vernal Field Office Supervisory Petroleum Engineering Technician at least 24 hours in advance of casing cementing operations and BOPE & casing pressure tests.
- All requirements listed in Onshore Order #2 III. E. Special Drilling Operations are applicable for air drilling of surface hole.
- Blowout prevention equipment (BOPE) shall remain in use until the well is completed or abandoned. Closing unit controls shall remain unobstructed and readily accessible at all times. Choke manifolds shall be located outside of the rig substructure.
- All BOPE components shall be inspected daily and those inspections shall be recorded in the
  daily drilling report. Components shall be operated and tested as required by Onshore Oil &
  Gas Order No. 2 to insure good mechanical working order. All BOPE pressure tests shall be
  performed by a test pump with a chart recorder and <u>NOT</u> by the rig pumps. Test shall be
  reported in the driller's log.
- BOP drills shall be initially conducted by each drilling crew within 24 hours of drilling out from under the surface casing and weekly thereafter as specified in Onshore Oil & Gas Order No. 2.
- Casing pressure tests are required before drilling out from under all casing strings set and cemented in place.
- No aggressive/fresh hard-banded drill pipe shall be used within casing.
- Cement baskets shall not be run on surface casing.

- The operator must report all shows of water or water-bearing sands to the BLM. If flowing water
  is encountered it must be sampled, analyzed, and a copy of the analyses submitted to the BLM
  Vernal Field Office.
- The operator must report encounters of all non oil & gas mineral resources (such as Gilsonite, tar sands, oil shale, trona, etc.) to the Vernal Field Office, in writing, within 5 working days of each encounter. Each report shall include the well name/number, well location, date and depth (from KB or GL) of encounter, vertical footage of the encounter and, the name of the person making the report (along with a telephone number) should the BLM need to obtain additional information.
- A complete set of angular deviation and directional surveys of a directional well will be submitted to the Vernal BLM office engineer within 30 days of the completion of the well.
- While actively drilling, chronologic drilling progress reports shall be filed directly with the BLM, Vernal Field Office on a weekly basis in sundry, letter format or e-mail to the Petroleum Engineers until the well is completed.
- A cement bond log (CBL) will be run from the production casing shoe to the top of cement and shall be utilized to determine the bond quality for the production casing. Submit a field copy of the CBL to this office.
- Please submit an electronic copy of all other logs run on this well by CD (compact disc).
   This submission will supersede the requirement for submittal of paper logs to the BLM.
- There shall be no deviation from the proposed drilling, completion, and/or workover program as approved. Safe drilling and operating practices must be observed. Any changes in operation must have prior approval from the BLM Vernal Field Office.

#### **OPERATING REQUIREMENT REMINDERS:**

- All wells, whether drilling, producing, suspended, or abandoned, shall be identified in accordance with 43 CFR 3162.6. There shall be a sign or marker with the name of the operator, lease serial number, well number, and surveyed description of the well.
- For information regarding production reporting, contact the Office of Natural Resources Revenue (ONRR) at <a href="https://www.ONRR.gov">www.ONRR.gov</a>.
- Should the well be successfully completed for production, the BLM Vernal Field office must be
  notified when it is placed in a producing status. Such notification will be by written
  communication and must be received in this office by not later than the fifth business day
  following the date on which the well is placed on production. The notification shall provide, as a
  minimum, the following informational items:
  - Operator name, address, and telephone number.
  - Well name and number.
  - o Well location (¼¼, Sec., Twn, Rng, and P.M.).
  - Date well was placed in a producing status (date of first production for which royalty will be paid).
  - o The nature of the well's production, (i.e., crude oil, or crude oil and casing head gas, or natural gas and entrained liquid hydrocarbons).
  - o The Federal or Indian lease prefix and number on which the well is located; otherwise the non-Federal or non-Indian land category, i.e., State or private.
  - Unit agreement and/or participating area name and number, if applicable.
  - o Communitization agreement number, if applicable.
- Any venting or flaring of gas shall be done in accordance with Notice to Lessees (NTL) 4A and needs prior approval from the BLM Vernal Field Office.
- All undesirable events (fires, accidents, blowouts, spills, discharges) as specified in NTL 3A will
  be reported to the BLM, Vernal Field Office. Major events, as defined in NTL3A, shall be
  reported verbally within 24 hours, followed by a written report within 15 days. "Other than Major
  Events" will be reported in writing within 15 days. "Minor Events" will be reported on the
  Monthly Report of Operations and Production.
- Whether the well is completed as a dry hole or as a producer, "Well Completion and Recompletion Report and Log" (BLM Form 3160-4) shall be submitted not later than 30 days after completion of the well or after completion of operations being performed, in accordance with 43 CFR 3162.4-1. Two copies of all logs run, core descriptions, and all other surveys or data obtained and compiled during the drilling, workover, and/or completion operations, shall be filed on BLM Form 3160-4. Submit with the well completion report a geologic report including, at a minimum, formation tops, and a summary and conclusions. Also include deviation surveys, sample descriptions, strip logs, core data, drill stem test data, and results of production tests if

Page 6 of 6 Well: UTE TRIBAL 12-03-E4 7/25/2013

performed. Samples (cuttings, fluid, and/or gas) shall be submitted only when requested by the BLM, Vernal Field Office.

- All off-lease storage, off-lease measurement, or commingling on-lease or off-lease, shall have prior written approval from the BLM Vernal Field Office.
- Oil and gas meters shall be calibrated in place prior to any deliveries. The BLM Vernal Field
  Office Petroleum Engineers will be provided with a date and time for the initial meter calibration
  and all future meter proving schedules. A copy of the meter calibration reports shall be
  submitted to the BLM Vernal Field Office. All measurement facilities will conform to the API
  standards for liquid hydrocarbons and the AGA standards for natural gas measurement. All
  measurement points shall be identified as the point of sale or allocation for royalty purposes.
- A schematic facilities diagram as required by Onshore Oil & Gas Order No. 3 shall be submitted
  to the BLM Vernal Field Office within 30 days of installation or first production, whichever occurs
  first. All site security regulations as specified in Onshore Oil & Gas Order No. 3 shall be
  adhered to. All product lines entering and leaving hydrocarbon storage tanks will be effectively
  sealed in accordance with Onshore Oil & Gas Order No. 3.
- Any additional construction, reconstruction, or alterations of facilities, including roads, gathering lines, batteries, etc., which will result in the disturbance of new ground, shall require the filing of a suitable plan and need prior approval of the BLM Vernal Field Office. Emergency approval may be obtained orally, but such approval does not waive the written report requirement.
- No location shall be constructed or moved, no well shall be plugged, and no drilling or workover
  equipment shall be removed from a well to be placed in a suspended status without prior
  approval of the BLM Vernal Field Office. If operations are to be suspended for more than 30
  days, prior approval of the BLM Vernal Field Office shall be obtained and notification given
  before resumption of operations.
- Pursuant to Onshore Oil & Gas Order No. 7, this is authorization for pit disposal of water produced from this well for a period of 90 days from the date of initial production. A permanent disposal method must be approved by this office and in operation prior to the end of this 90-day period. In order to meet this deadline, an application for the proposed permanent disposal method shall be submitted along with any necessary water analyses, as soon as possible, but no later than 45 days after the date of first production. Any method of disposal which has not been approved prior to the end of the authorized 90-day period will be considered as an Incident of Noncompliance and will be grounds for issuing a shut-in order until an acceptable manner for disposing of said water is provided and approved by this office.
- Unless the plugging is to take place immediately upon receipt of oral approval, the Field Office Petroleum Engineers must be notified at least 24 hours in advance of the plugging of the well, in order that a representative may witness plugging operations. If a well is suspended or abandoned, all pits must be fenced immediately until they are backfilled. The "Subsequent Report of Abandonment" (Form BLM 3160-5) must be submitted within 30 days after the actual plugging of the well bore, showing location of plugs, amount of cement in each, and amount of casing left in hole, and the current status of the surface restoration.

#### STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES

AUG 0 5 2013

RECEIVED

DIVISION OF OIL, GAS AND MINING

			Div. of Oil, Gas & Mining							
		ENTITY ACTIO	FION FORM							
Operator:	Petroglyph Operating	Company	Operator Account Number: N 3800							
Address:	P.O. Box 607									
	city Roosevelt		_							
	state UT	zip 84066	Phone Number: (435) 722-2531							

Well 1

API Number	Well N	ame	QQ	Sec	Twp	Rng	County
4301351843	Ute Tribal 12-03-E4		NENW	12	5S	4W	Duchesne
Action Code	Current Entity Number	New Entity Number	S	pud Dat	te	l .	ity Assignment ffective Date
В	99999	18870	7	/31/201	3		

Comments: Please add to existing Ute Tribal 01-14-E4 Tank Battery.

	9		A	ŧ.	<b>C</b>	<u></u>	ij	الما	5	1 :	3	1	1	1
ı	Ë	i	ě	j	i.	3	٠,	ı i	1,	١.	jį.	á	1 1	L

Well 2

API Number	Well I	Name	QQ	Sec	Twp	Rng	County	
Action Code	Current Entity Number	New Entity Number	S	Spud Date		Entity Assignment Effective Date		
omments:								

Wall 3

API Number	Well	Name	QQ	Sec	Twp	Rng	County
Action Code	Current Entity Number	New Entity Number	Spud Date		lte	Entity Assignment Effective Date	
omments:			<u> </u>		<u></u>		· · · · · · · · · · · · · · · · · · ·

#### **ACTION CODES:**

- A Establish new entity for new well (single well only)
- B Add new well to existing entity (group or unit well)
- C Re-assign well from one existing entity to another existing entity
- D Re-assign well from one existing entity to a new entity
- E Other (Explain in 'comments' section)

Rodrigo Jurado	
Name (Please Print)	
Signature Signature	<del></del>
Regulatory Compliance Spc	7/31/2013
Title	Date

## RECEIVED

FORM APPROVED OMB No. 1004-0136 Expires July 31, 2010

#### **UNITED STATES** DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

NOV 0 3 2012

	Emples 341, 2010	
5.	Lease Serial No. 1420H624744	
6.	If Indian, Allottee or Tribe Name	_

APPLICATION FOR PERM	IT TO DRILL OR REENTER BLM	If Indian, Allottee or Tribe Name     UINTAH AND OURAY		
Ia. Type of Work: DRILL REENTER	CONFIDENTIAL	7. If Unit or CA Agreement, Name and No. 1420H624650		
1b. Type of Well: ⊠ Oil Well ☐ Gas Well ☐	Other Single Zone Multiple Zone	Lease Name and Well No.     UTE TRIBAL 12-03-E4		
Name of Operator Content     PETROGLYPH OPERATING CO INDIVIDUAL CONTENT	act: ED H TROTTER otter@easilink.com	9. API Well No. 43013 5 18 43		
3a. Address	3b. Phone No. (include area code)	10. Field and Pool, of Exploratory		
ROOSEVELT, UT 84066	Ph: 435-789-4120 Fx: 435-789-1420	ANTELOPE CREEK		
4. Location of Well (Report location clearly and in acc	ordance with any State requirements.*)	11. Sec., T., R., M., or Blk. and Survey or Area		
At surface NENW 469FNL 1718F\	VL 40.066875 N Lat, 110.287756 W Lon	Sec 12 T5S R4W Mer UBM		
At proposed prod. zone NENW 660FNL 1980F\		SME: FEE		
14. Distance in miles and direction from nearest town or p 16.89 MILES SOUTHWEST OF MYTON, UT	ost office* AH	12. County or Parish DUCHESNE UT		
15. Distance from proposed location to nearest property or lease line, ft. (Also to nearest drig, unit line, if any)	16. No. of Acres in Lease	17. Spacing Unit dedicated to this well		
469	480.00			
18. Distance from proposed location to nearest well, drilling completed, applied for, on this lease, ft.	ng, 19. Proposed Depth	20. BLM/BIA Bond No. on file		
2142	6073 MD 6056 TVD	LPM4138335		
21. Elevations (Show whether DF, KB, RT, GL, etc. 5968 GL	22. Approximate date work will start 01/15/2013	23. Estimated duration 45 DAYS		
	24. Attachments	······································		
The following, completed in accordance with the requiremen	ts of Onshore Oil and Gas Order No. 1, shall be attached to	this form:		
<ol> <li>Well plat certified by a registered surveyor.</li> <li>A Drilling Plan.</li> <li>A Surface Use Plan (if the location is on National Forest S SUPO shall be filed with the appropriate Forest Service</li> </ol>	4. Bond to cover the operation litem 20 above).  System Lands, the 5. Operator certification	ons unless covered by an existing bond on file (see formation and/or plans as may be required by the		
25. Signature (Electronic Submission)	Name (Printed/Typed) LESTER FARNSWORTH Ph: 435-722-	2531 Date 11/02/2012		
Title DISTRICT MANAGER				
Approved by (Signature)	Name (Printed/Typed)  Jerry Kenczk	A JUL 2 5 2013		
Title Assistant Field Manager Lands & Mineral Resources	Office	1 30 F T 3 EA16.		
Application approval does not warrant or certify the applicant operations thereon.  Conditions of approval, if any, are attached.	CONDITIONS	S OF APPROVAL ATTACHED		
Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 121 States any false, fictitious or fraudulent statements or representations.	2, make it a crime for any person knowingly and willfully to tations as to any matter within its jurisdiction.	o make to any department or agency Chie United		
Additional Operator Remarks (see next page)		JUL 3 0 2013		
Electronic Outer:	1 4477704 10 11 (1 717011111111111111111111111111			

Electronic Submission #157721 verified by the BLM Well Information System For PETROGLYPH OPERATING CO INC, sent to the Vernal Committed to AFMSS for processing by JOHNETTA MAGEE on 11/13/2012 (13JM07864) DIV. OF OIL, GAS & MINING

OTICE OF APPROVAL



## UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT VERNAL FIELD OFFICE

VERNAL FIELD OFFICE VERNAL, UT 84078

(435) 781-4400



#### CONDITIONS OF APPROVAL FOR APPLICATION FOR PERMIT TO DRILL

Company: Well No:

PETROGLYPH OPERATING CO.

**UTE TRIBAL 12-03-E4** 

API No: 43-013-51843

Location: Lease No: NENW, Sec. 12, T5S, R4W

14-20-H62-4744

Agreement: N/A

**OFFICE NUMBER:** 

(435) 781-4400

**OFFICE FAX NUMBER:** 

(435) 781-3420

## A COPY OF THESE CONDITIONS SHALL BE FURNISHED TO YOUR FIELD REPRESENTATIVE TO INSURE COMPLIANCE

All lease and/or unit operations are to be conducted in such a manner that full compliance is made with the applicable laws, regulations (43 CFR Part 3160), and this approved Application for Permit to Drill including Surface and Downhole Conditions of Approval. The operator is considered fully responsible for the actions of his subcontractors. A copy of the approved APD must be on location during construction, drilling, and completion operations. This permit is approved for a two (2) year period, or until lease expiration, whichever occurs first. An additional extension, up to two (2) years, may be applied for by sundry notice prior to expiration.

#### **NOTIFICATION REQUIREMENTS**

Construction Activity (Notify Ute Tribe Energy & Minerals Dept. and BLM Environmental Scientist)	-	The Ute Tribe Energy & Minerals Dept. and BLM Environmental Scientist shall be notified at least 48 hours in advance of any construction activity. The Ute Tribal office is open Monday through Thursday.
Construction Completion (Notify Ute Tribe Energy & Minerals Dept. and BLM Environmental Scientist)		Upon completion of the pertinent APD/ROW construction, notify the Ute Tribe Energy & Minerals Dept. for a Tribal Technician to verify the Affidavit of Completion. Notify the BLM Environmental Scientist prior to moving on the drilling rig.
Spud Notice (Notify BLM Petroleum Engineer)	-	Twenty-Four (24) hours prior to spudding the well.
Casing String & Cementing (Notify BLM Supv. Petroleum Tech.)	-	Twenty-Four (24) hours prior to running casing and cementing all casing strings to: blm_ut_vn_opreport@blm.gov.
BOP & Related Equipment Tests (Notify BLM Supv. Petroleum Tech.)	-	Twenty-Four (24) hours prior to initiating pressure tests.
First Production Notice (Notify BLM Petroleum Engineer)	-	Within Five (5) business days after new well begins or production resumes after well has been off production for more than ninety (90) days.

#### SURFACE USE PROGRAM CONDITIONS OF APPROVAL (COAs)

- Any deviation of submitted APD's, which includes Petroglyph's surface use plan, and the
  operator will notify the BLM in writing and will receive written authorization of any such change
  with appropriate authorization.
- All operator employees and/or authorized personnel (sub-contractors) in the field will have approved applicable APD's, and COA authorizations on their person(s) during all phases of construction.
- All vehicular traffic, personnel movement, construction/restoration operations should be confined to the area examined and approved, and to the existing roadways and/or evaluated access routes.
- The Authorized Officer from the BLM will be notified should cultural remains from subsurface deposits be exposed or identified during construction. All construction will cease until resources can be identified and protected properly.
- Production facilities would be painted Covert Green for the 12-03-E4 to blend in with the surrounding habitat, unless otherwise stated from the private land owner agreement.
- Site reclamation would be accomplished for portions of the well pad not needed for production, within 6 months of completion, weather permitting. This also includes any roads, and pipeline areas that have been disturbed as well. Roads and pipeline disturbances can undergo reclamation immediately after the pipeline is installed and after the roads are built. Please contact surface owner or the BLM AO for possible seed mixes to use in the project area. Nonnatives can be used; however lbs/ac must be kept low to minimize the chance of a monoculture.
- The pad locations will be recontoured and planted in native vegetation as per the land owner's request.

#### DOWNHOLE PROGRAM CONDITIONS OF APPROVAL (COAs)

#### SITE SPECIFIC DOWNHOLE COAs:

- Gamma Ray Log shall be run from Total Depth to Surface
- CBL will be run from TD to TOC.
- Cement for the surface casing will be circulated to the surface.
- Cement for long-string shall be circulated 200' above surface casing shoe.

#### Variance Granted

Variance for Air-drilling is granted per

All provisions outlined in Onshore Oil & Gas Order #2 Drilling Operations shall be strictly adhered to. The following items are emphasized:

#### DRILLING/COMPLETION/PRODUCING OPERATING STANDARDS

- The spud date and time shall be reported orally to Vernal Field Office within 24 hours of spudding.
- Notify Vernal Field Office Supervisory Petroleum Engineering Technician at least 24 hours in advance of casing cementing operations and BOPE & casing pressure tests.
- All requirements listed in Onshore Order #2 III. E. Special Drilling Operations are applicable for air drilling of surface hole.
- Blowout prevention equipment (BOPE) shall remain in use until the well is completed or abandoned. Closing unit controls shall remain unobstructed and readily accessible at all times. Choke manifolds shall be located outside of the rig substructure.
- All BOPE components shall be inspected daily and those inspections shall be recorded in the
  daily drilling report. Components shall be operated and tested as required by Onshore Oil &
  Gas Order No. 2 to insure good mechanical working order. All BOPE pressure tests shall be
  performed by a test pump with a chart recorder and <u>NOT</u> by the rig pumps. Test shall be
  reported in the driller's log.
- BOP drills shall be initially conducted by each drilling crew within 24 hours of drilling out from under the surface casing and weekly thereafter as specified in Onshore Oil & Gas Order No. 2.
- Casing pressure tests are required before drilling out from under all casing strings set and cemented in place.
- No aggressive/fresh hard-banded drill pipe shall be used within casing.
- Cement baskets shall not be run on surface casing.

- The operator must report all shows of water or water-bearing sands to the BLM. If flowing water
  is encountered it must be sampled, analyzed, and a copy of the analyses submitted to the BLM
  Vernal Field Office.
- The operator must report encounters of all non oil & gas mineral resources (such as Gilsonite, tar sands, oil shale, trona, etc.) to the Vernal Field Office, in writing, within 5 working days of each encounter. Each report shall include the well name/number, well location, date and depth (from KB or GL) of encounter, vertical footage of the encounter and, the name of the person making the report (along with a telephone number) should the BLM need to obtain additional information.
- A complete set of angular deviation and directional surveys of a directional well will be submitted to the Vernal BLM office engineer within 30 days of the completion of the well.
- While actively drilling, chronologic drilling progress reports shall be filed directly with the BLM, Vernal Field Office on a weekly basis in sundry, letter format or e-mail to the Petroleum Engineers until the well is completed.
- A cement bond log (CBL) will be run from the production casing shoe to the top of cement and shall be utilized to determine the bond quality for the production casing. Submit a field copy of the CBL to this office.
- Please submit an electronic copy of all other logs run on this well by CD (compact disc).
   This submission will supersede the requirement for submittal of paper logs to the BLM.
- There shall be no deviation from the proposed drilling, completion, and/or workover program as approved. Safe drilling and operating practices must be observed. Any changes in operation must have prior approval from the BLM Vernal Field Office.

#### **OPERATING REQUIREMENT REMINDERS:**

- All wells, whether drilling, producing, suspended, or abandoned, shall be identified in accordance with 43 CFR 3162.6. There shall be a sign or marker with the name of the operator, lease serial number, well number, and surveyed description of the well.
- For information regarding production reporting, contact the Office of Natural Resources Revenue (ONRR) at <a href="https://www.ONRR.gov">www.ONRR.gov</a>.
- Should the well be successfully completed for production, the BLM Vernal Field office must be
  notified when it is placed in a producing status. Such notification will be by written
  communication and must be received in this office by not later than the fifth business day
  following the date on which the well is placed on production. The notification shall provide, as a
  minimum, the following informational items:
  - Operator name, address, and telephone number.
  - Well name and number.
  - Well location (¼¼, Sec., Twn, Rng, and P.M.).
  - Date well was placed in a producing status (date of first production for which royalty will be paid).
  - o The nature of the well's production, (i.e., crude oil, or crude oil and casing head gas, or natural gas and entrained liquid hydrocarbons).
  - o The Federal or Indian lease prefix and number on which the well is located; otherwise the non-Federal or non-Indian land category, i.e., State or private.
  - Unit agreement and/or participating area name and number, if applicable.
  - o Communitization agreement number, if applicable.
- Any venting or flaring of gas shall be done in accordance with Notice to Lessees (NTL) 4A and needs prior approval from the BLM Vernal Field Office.
- All undesirable events (fires, accidents, blowouts, spills, discharges) as specified in NTL 3A will
  be reported to the BLM, Vernal Field Office. Major events, as defined in NTL3A, shall be
  reported verbally within 24 hours, followed by a written report within 15 days. "Other than Major
  Events" will be reported in writing within 15 days. "Minor Events" will be reported on the
  Monthly Report of Operations and Production.
- Whether the well is completed as a dry hole or as a producer, "Well Completion and Recompletion Report and Log" (BLM Form 3160-4) shall be submitted not later than 30 days after completion of the well or after completion of operations being performed, in accordance with 43 CFR 3162.4-1. Two copies of all logs run, core descriptions, and all other surveys or data obtained and compiled during the drilling, workover, and/or completion operations, shall be filed on BLM Form 3160-4. Submit with the well completion report a geologic report including, at a minimum, formation tops, and a summary and conclusions. Also include deviation surveys, sample descriptions, strip logs, core data, drill stem test data, and results of production tests if

Page 6 of 6 Well: UTE TRIBAL 12-03-E4 7/25/2013

performed. Samples (cuttings, fluid, and/or gas) shall be submitted only when requested by the BLM, Vernal Field Office.

- All off-lease storage, off-lease measurement, or commingling on-lease or off-lease, shall have prior written approval from the BLM Vernal Field Office.
- Oil and gas meters shall be calibrated in place prior to any deliveries. The BLM Vernal Field
  Office Petroleum Engineers will be provided with a date and time for the initial meter calibration
  and all future meter proving schedules. A copy of the meter calibration reports shall be
  submitted to the BLM Vernal Field Office. All measurement facilities will conform to the API
  standards for liquid hydrocarbons and the AGA standards for natural gas measurement. All
  measurement points shall be identified as the point of sale or allocation for royalty purposes.
- A schematic facilities diagram as required by Onshore Oil & Gas Order No. 3 shall be submitted
  to the BLM Vernal Field Office within 30 days of installation or first production, whichever occurs
  first. All site security regulations as specified in Onshore Oil & Gas Order No. 3 shall be
  adhered to. All product lines entering and leaving hydrocarbon storage tanks will be effectively
  sealed in accordance with Onshore Oil & Gas Order No. 3.
- Any additional construction, reconstruction, or alterations of facilities, including roads, gathering lines, batteries, etc., which will result in the disturbance of new ground, shall require the filing of a suitable plan and need prior approval of the BLM Vernal Field Office. Emergency approval may be obtained orally, but such approval does not waive the written report requirement.
- No location shall be constructed or moved, no well shall be plugged, and no drilling or workover
  equipment shall be removed from a well to be placed in a suspended status without prior
  approval of the BLM Vernal Field Office. If operations are to be suspended for more than 30
  days, prior approval of the BLM Vernal Field Office shall be obtained and notification given
  before resumption of operations.
- Pursuant to Onshore Oil & Gas Order No. 7, this is authorization for pit disposal of water produced from this well for a period of 90 days from the date of initial production. A permanent disposal method must be approved by this office and in operation prior to the end of this 90-day period. In order to meet this deadline, an application for the proposed permanent disposal method shall be submitted along with any necessary water analyses, as soon as possible, but no later than 45 days after the date of first production. Any method of disposal which has not been approved prior to the end of the authorized 90-day period will be considered as an Incident of Noncompliance and will be grounds for issuing a shut-in order until an acceptable manner for disposing of said water is provided and approved by this office.
- Unless the plugging is to take place immediately upon receipt of oral approval, the Field Office Petroleum Engineers must be notified at least 24 hours in advance of the plugging of the well, in order that a representative may witness plugging operations. If a well is suspended or abandoned, all pits must be fenced immediately until they are backfilled. The "Subsequent Report of Abandonment" (Form BLM 3160-5) must be submitted within 30 days after the actual plugging of the well bore, showing location of plugs, amount of cement in each, and amount of casing left in hole, and the current status of the surface restoration.

#### STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES

AUG 0 5 2013

RECEIVED

DIVISION OF OIL, GAS AND MINING

			Div. of Oil, Gas & Mining					
ENTITY ACTION FORM								
Operator:	Petroglyph Operating	Company	Operator Account Number: N 3800					
Address:	P.O. Box 607							
	city Roosevelt		_					
	state UT	zip 84066	Phone Number: (435) 722-2531					

Well 1

API Number	Well N	ame	QQ	Sec	Twp	Rng	County
4301351843	Ute Tribal 12-03-E4		NENW	12	5S	4W	Duchesne
Action Code	Current Entity Number	New Entity Number	S	Spud Date		l .	ity Assignment ffective Date
В	99999	18870	7	/31/201	3		

Comments: Please add to existing Ute Tribal 01-14-E4 Tank Battery.

	9		A	ŧ.	<b>C</b>	<u></u>	ij	الما	5	1 :	3	1	1	1
ı	Ë	i	ě	j	i.	3	٠,	ı i	1,	١.	jį.	á	1 1	L

Well 2

API Number	Well Name		QQ	QQ Sec Twp			Rng County			
Action Code	Current Entity Number	New Entity Number	Spud Date		Entity Assignment Effective Date					
omments:										

Wall 3

API Number	Well	Name	QQ	Sec	Twp	Rng	County
Action Code	Current Entity Number	New Entity Number	Spud Date		lte	Entity Assignment Effective Date	
omments:			<u> </u>		<u></u>		· · · · · · · · · · · · · · · · · · ·

#### **ACTION CODES:**

- A Establish new entity for new well (single well only)
- B Add new well to existing entity (group or unit well)
- C Re-assign well from one existing entity to another existing entity
- D Re-assign well from one existing entity to a new entity
- E Other (Explain in 'comments' section)

Rodrigo Jurado	
Name (Please Print)	
Signature Signature	<del></del>
Regulatory Compliance Spc	7/31/2013
Title	Date

### BLM - Vernal Field Office - Notification Form

Ope	rator Petroglyph Operating Co.	Rig Name/# Caps	Star 334
Subi	nitted By Geno Rowland P	hone Number 970	-361-3271
	Name/Number Ute Tribal 12-03		
	Qtr NE/NW Section 12 To	100	Range 4W
	e Serial Number 14-20-H62-474		
	Number <u>43-013-51843</u>		
	<u>1 Notice</u> – Spud is the initial sp	oudding of the we	ell, not drilling
out l	pelow a casing string.		
	Date/Time	AM [	РМ
Casi time	ng – Please report time casing s. Surface Casing Intermediate Casing Production Casing Liner	run starts, not co	ementing
	Other		
	Date/Time <u>08/18/2013</u> <u>07</u>	:00 AM 🗸	РМ
BOP	<u>E</u> Initial BOPE test at surface cas BOPE test at intermediate cas		RECEIVED
	30 day BOPE test Other		DIV. OF OIL, GAS & MINING
	Date/Time	AM [	РМ
Rem	arks Intend to run 5-1/2" Prod. Cs	ng. to a shoe depth	of 7312'MD
			and the second s

# CONFIDENTIAL

## BLM - Vernal Field Office - Notification Form

Opera	ator Petroglyph Operating Co. Rig Name	e/# <u>CapS</u>	tar 334
Suhm	nitted By <u>Geno Rowland</u> Phone Nur	nber <u>970-</u> :	361-3271
Mall	Name/Number Life Tribal 12-03-E4		
Otr/C	otr NE/NW Section 12 Township 5	s R	ange <u>4W</u>
Qu/Q	e Serial Number <u>14-20-H62-4744</u>		
	Number 43-013-51843		
Spud	Notice - Spud is the initial spudding of	of the we	II, not drilling
out b	pelow a casing string.		
		—	
	Date/Time	AM L	PM
Casir	ng – Please report time casing run star	ts, not ce	enenung
times			
	Surface Casing		
	Intermediate Casing		
	Production Casing		
	Liner		
	Other		
		АМ 🔲	рм 🗀
	Date/Time	AIT	117
DOD	r		DEOEWED
BOP	<u>E</u> Initial BOPE test at surface casing po	int	RECEIVED
<b>Y</b>	BOPE test at intermediate casing poir	nt	AUG 1 2 2013
	30 day BOPE test	•	DIV. OF OIL, GAS & MINING
H	•		DIV. OF OIL, GAS & WINNING
	Other		
	Date/Time 08/13/2013 15:00	AM 🗌	PM 🗸
			<del></del>
Do-	narks Intend to test an 11"x 5M Townsend	30P at srf	c. csng.
Ken	idi KS <sub>point.</sub>		+

Sundry Number: 42971 API Well Number: 43013518430000 FEDERAL APPROVAL OF THIS ACTION IS NECESSARY

	STATE OF UTAH			FORM 9
	DEPARTMENT OF NATURAL RESOUR DIVISION OF OIL, GAS, AND MI	-	3	5.LEASE DESIGNATION AND SERIAL NUMBER: 1420H624744
	RY NOTICES AND REPORTS		6. IF INDIAN, ALLOTTEE OR TRIBE NAME: Ute In	
Do not use this form for pro current bottom-hole depth, FOR PERMIT TO DRILL forr	oposals to drill new wells, significantly reenter plugged wells, or to drill horize n for such proposals.	/ deep ontal l	pen existing wells below laterals. Use APPLICATION	7.UNIT or CA AGREEMENT NAME:
1. TYPE OF WELL Oil Well				8. WELL NAME and NUMBER: Ute Tribal 12-03-E4
2. NAME OF OPERATOR: PETROGLYPH OPERATING O	co			9. API NUMBER: 43013518430000
3. ADDRESS OF OPERATOR: 960 Broadway Avenue, Ste	500 , Boise, ID, 83703		<b>DNE NUMBER:</b> 8 685-7685 Ext	9. FIELD and POOL or WILDCAT: BRUNDAGE CANYON
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0469 FNL 1718 FWL				COUNTY: DUCHESNE
QTR/QTR, SECTION, TOWNSI Qtr/Qtr: NENW Section:	HIP, RANGE, MERIDIAN: 12 Township: 05.0S Range: 04.0W Me	ridian	ı: U	STATE: UTAH
11. CHEC	K APPROPRIATE BOXES TO INDICA	ATE N	ATURE OF NOTICE, REPOR	RT, OR OTHER DATA
TYPE OF SUBMISSION			TYPE OF ACTION	
NOTICE OF INTENT Approximate date work will start:  10/2/2013  SUBSEQUENT REPORT Date of Work Completion:  SPUD REPORT Date of Spud:  DRILLING REPORT Report Date:  12. DESCRIBE PROPOSED OR	CHANGE TO PREVIOUS PLANS CHANGE WELL STATUS DEEPEN OPERATOR CHANGE PRODUCTION START OR RESUME REPERFORATE CURRENT FORMATION TUBING REPAIR WATER SHUTOFF WILDCAT WELL DETERMINATION  COMPLETED OPERATIONS. Clearly show Please see attached.		CHANGE TUBING COMMINGLE PRODUCING FORMATIONS FRACTURE TREAT PLUG AND ABANDON RECLAMATION OF WELL SITE SIDETRACK TO REPAIR WELL VENT OR FLARE SI TA STATUS EXTENSION OTHER Prinent details including dates, d	CASING REPAIR  CHANGE WELL NAME  CONVERT WELL TYPE  NEW CONSTRUCTION  PLUG BACK  RECOMPLETE DIFFERENT FORMATION  TEMPORARY ABANDON  WATER DISPOSAL  APD EXTENSION  OTHER:  DEPths, volumes, etc.  Accepted by the Utah Division of Oil, Gas and Mining  Date: October 02, 2013  By:
NAME (PLEASE PRINT)	PHONE NUM	BER	TITLE	
Rodrigo Jurado  SIGNATURE	435 722-5302		Regulatory & Compliance S  DATE	рс
N/A			9/27/2013	

STATE OF UTAH FORM 9

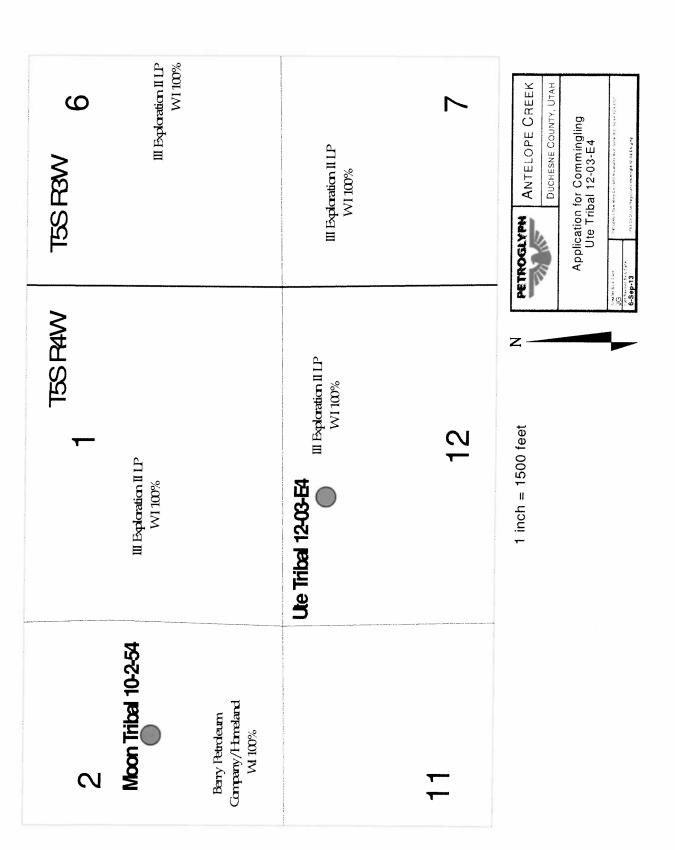
SUNDRY NOTICES AND REPORTS ON WELLS  Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.  1. TYPE OF WELL  OIL WELL  OCCUPANTION FOR PERMIT TO DRILL FOR SUCH PROPOSALS.  8.	LEASE DESIGNATION AND SERIAL NUMBER:  14-20-H62-4744  IF INDIAN, ALLOTTEE OR TRIBE NAME:  Jte Indian Tribe  UNIT OF CA AGREEMENT NAME:  4-20-H62-4650  WELL NAME and NUMBER:  Jte Tribal 12-03-E4  API NUMBER:  301351843
Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.  1. TYPE OF WELL  OIL WELL  OCCUPANTION FOR PERMIT TO OTHER  8.	Jte Indian Tribe  UNIT or CA AGREEMENT NAME: 4-20-H62-4650  WELL NAME and NUMBER: Jte Tribal 12-03-E4  API NUMBER:
Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.  1. TYPE OF WELL  OIL WELL  OLIVEIT  OTHER	4-20-H62-4650  WELL NAME and NUMBER:  Jte Tribal 12-03-E4  API NUMBER:
1. TYPE OF WELL OIL WELL [7] CAS WELL [7] OTHER	Ite Tribal 12-03-E4 API NUMBER:
	API NUMBER:
	301351843
	. FIELD AND POOL, OR WILDCAT: Antelope Creek
4. LOCATION OF WELL	
FOOTAGES AT SURFACE: 469' FNL, 1718' FWL	DUNTY: Duchesne
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: NENW 12 5S 4W U	ATE: UTAH
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT	OR OTHER DATA
TYPE OF SUBMISSION TYPE OF ACTION	
✓ NOTICE OF INTENT ☐ ACIDIZE ☐ DEEPEN	REPERFORATE CURRENT FORMATION
(Submit in Duplicate)	SIDETRACK TO REPAIR WELL
Approximate date work will start: CASING REPAIR NEW CONSTRUCTION	TEMPORARILY ABANDON
10/2/2013 CHANGE TO PREVIOUS PLANS OPERATOR CHANGE	TUBING REPAIR
CHANGE TUBING LI PLUG AND ABANDON SUBSEQUENT REPORT CHANGE WELL NAME PLUG BACK	VENT OR FLARE
(Submit Original Form Only)  CHANGE WELL STATUS  PRODUCTION (START/RESUME)	WATER DISPOSAL WATER SHUT-OFF
Date of work completion:  COMMINGLE PRODUCING FORMATIONS  RECLAMATION OF WELL SITE	OTHER:
CONVERT WELL TYPE RECOMPLETE - DIFFERENT FORMATION	OTHER.
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, et	c.
On or around 10/2/2013, depending on equipment availability, Petroglyph Operating intends to 4133-37, 4177-79, 4207-09, 4656-61, 4766-74, 4811-20, 5004-07, 5010-22, 5116-18, 5148-50, 5214-16, 5309-13, 5321-23, 5433-47, 5450-52, 5581-89, 5591-98, 5710-12, 5724-30, 5765-67, 5912-14, 5933-35, 5949-51, 5990-92, 6417-21, 6428-31, 6752-60, 6799-6807 & 7136-44. All p Titan 3-1/8" Perf Guns containing 22.7 gram charges, 0.42" EHD, 23.54" TTP @ 4 SPF @ 120° Composite Plugs for isolation we intent to fracture treat the following intervals: 6417-7144: 39,200 Gal of fluid containing 70,000#'s of sand, 5887-5992: 15% HCL (Vol yet to be determined) followed by a fresh water over flush, 5710-5798: 28,000 Gal of fluid containing 50,000#'s of sand, 5309-5452: 28,000 Gal of fluid containing 40,000#'s of sand, 5309-5452: 28,000 Gal of fluid containing 50,000#'s of sand, 5004-5022: 22,400 Gal of fluid containing 40,000#'s of sand, 4766-4820: 22,400 Gal of fluid containing 40,000#'s of sand, 4766-4820: 22,400 Gal of fluid containing 40,000#'s of sand, 4766-4820: 11,200 Gal of fluid containing 40,000#'s of sand, 4766-4820: 11,200 Gal of fluid containing 40,000#'s of sand, 4766-4820: 11,200 Gal of fluid containing 40,000#'s of sand, 4766-4820: 11,200 Gal of fluid containing 40,000#'s of sand, 4766-4820: 11,200 Gal of fluid containing 40,000#'s of sand, 4766-4820: 11,200 Gal of fluid containing 40,000#'s of sand, 4766-4820: 11,200 Gal of fluid containing 40,000#'s of sand, 4766-4820: 11,200 Gal of fluid containing 40,000#'s of sand, 4766-4820: 11,200 Gal of fluid containing 40,000#'s of sand, 4766-4820: 11,200 Gal of fluid containing 40,000#'s of sand, 4766-4820: 11,200 Gal of fluid containing 40,000#'s of sand, 4766-4820: 11,200 Gal of fluid containing 40,000#'s of sand, 4766-4820: 11,200 Gal of fluid containing 40,000#'s of sand, 4766-4820: 11,200 Gal of fluid containing 40,000#'s of sand, 4766-4820: 11,200 Gal of fluid containing 40,000#'s of sand, 4766-4820: 11,200 Gal of fluid containing 40,000#'s of sand, 4766-4820: 11,200 Gal o	perforate the following: 5160-64, 5168-70, 5196-5200, 5786-98, 5887-89, 5893-97, erforations will be made using Phased. Using Halliburton 8K  ontaining 40,000#'s of sand, ontaining 20,000#'s of sand. It and cleaned out. The well will e only estimates and will be
NAME (PLEASE PRINT) Rodrigo Jurado TITLE Regulatory Complian	ce Specialist
SIGNATURE DATE 9/26/2013	

(This space for State use only)

#### AFFIDAVIT OF NOTICE

State of Idaho	)
	) ss
County of Ada	)
I, Vera Johns follows:	on, the affiant herein, being of lawful age and duly sworn upon his oath deposes and states as
	is the Land Administrator for Petroglyph Energy, Inc., an Idaho Corporation, with headquarters way Avenue, Suite 500, Boise, ID 83706, and is duly authorized to make this Affidavit on behalf
	nergy, Inc. has submitted notices to commingle production from the Wasatch and Green River owing well lying within the boundaries of the Antelope Creek Plan of Cooperative Development 4-20-H62-4744:
	UTE TRIBAL 12-03-E4
	t is made in accordance with Utah's Oil, Gas and Mining regulation R649-3-22. As operator, ic. is the only owner of contiguous oil and gas leases overlying the pool and no notice to other
	Petroglyph Energy, Inc.
	Vera Johnson
State of Idaho	)
	) ss
County of Ada	
The above and September, 2013, by	d foregoing Affidavit was subscribed and sworn to before me on theday of Vera Johnson.
Witness my h	and and official seal.  March Jenhan  Notary Public
/CT: A	Trotal y Labrie

(SEAL)



	STATE OF UTAH			FORM 9
I	DEPARTMENT OF NATURAL RESOU DIVISION OF OIL, GAS, AND M		5.LEASE DESIGNATION AND SERIAL NUMBER: 1420H624744	
SUNDR	RY NOTICES AND REPORTS	VELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME: Ute In	
	posals to drill new wells, significant reenter plugged wells, or to drill hori: n for such proposals.			7.UNIT or CA AGREEMENT NAME:
1. TYPE OF WELL Oil Well				8. WELL NAME and NUMBER: Ute Tribal 12-03-E4
2. NAME OF OPERATOR: PETROGLYPH OPERATING C	;o			9. API NUMBER: 43013518430000
3. ADDRESS OF OPERATOR: 960 Broadway Avenue, Ste	500 , Boise, ID, 83703		IE NUMBER: 685-7685 Ext	9. FIELD and POOL or WILDCAT: BRUNDAGE CANYON
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0469 FNL 1718 FWL				COUNTY: DUCHESNE
QTR/QTR, SECTION, TOWNSH	HIP, RANGE, MERIDIAN: 12 Township: 05.0S Range: 04.0W M	/leridian:	U	STATE: UTAH
11. CHECI	K APPROPRIATE BOXES TO INDIC	CATE NA	TURE OF NOTICE, REPOR	T, OR OTHER DATA
TYPE OF SUBMISSION			TYPE OF ACTION	
	ACIDIZE	☐ AL	TER CASING	CASING REPAIR
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS	Сн	IANGE TUBING	CHANGE WELL NAME
Approximate date work will start.	CHANGE WELL STATUS	□ со	MMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN	☐ FR	ACTURE TREAT	NEW CONSTRUCTION
10/12/2013	OPERATOR CHANGE	☐ PL	UG AND ABANDON	PLUG BACK
SPUD REPORT	✓ PRODUCTION START OR RESUME	RE	CLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION
Date of Spud:	REPERFORATE CURRENT FORMATION	SIE	DETRACK TO REPAIR WELL	TEMPORARY ABANDON
	TUBING REPAIR	☐ VE	NT OR FLARE	WATER DISPOSAL
DRILLING REPORT Report Date:	WATER SHUTOFF	□ sı	TA STATUS EXTENSION	APD EXTENSION
,	WILDCAT WELL DETERMINATION		UED.	OTHER:
44 DECORIDE BRODOCED OR				<u> </u>
	COMPLETED OPERATIONS. Clearly sho first production for this we			Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY October 22, 2013
NAME (DI EASE DRINT)	DUONE NIII	MRED	TITLE	
NAME (PLEASE PRINT) Rodrigo Jurado	<b>PHONE NUM</b> 435 722-5302		Regulatory & Compliance S	рс
SIGNATURE N/A			<b>DATE</b> 10/22/2013	

Sundry Number: 42948 API Well Number: 43013518430000 FEDERAL APPROVAL OF THIS ACTION IS NECESSARY

STATE OF UTAH		FORM 9
	=	5.LEASE DESIGNATION AND SERIAL NUMBER: 1420H624744
Y NOTICES AND REPORTS	ON WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME: Ute In
		7.UNIT or CA AGREEMENT NAME:
		8. WELL NAME and NUMBER: Ute Tribal 12-03-E4
0		9. API NUMBER: 43013518430000
500 , Boise, ID, 83703	<b>PHONE NUMBER:</b> 208 685-7685 Ext	9. FIELD and POOL or WILDCAT: BRUNDAGE CANYON
		COUNTY: DUCHESNE
IP, RANGE, MERIDIAN: 2 Township: 05.0S Range: 04.0W Mer	idian: U	STATE: UTAH
( APPROPRIATE BOXES TO INDICA	TE NATURE OF NOTICE, REPOR	RT, OR OTHER DATA
	TYPE OF ACTION	
g Company, Inc. requests pon from the Wasatch and Grabove. Petroglyph Operating ccordance with with Utah's	ermission to commingle een River Formations on has made all necessary Oil, Gas, and Mining	Accepted by the Utah Division of
PHONE NUMB		
435 722-5302	DATE	рс
	DEPARTMENT OF NATURAL RESOURCE DIVISION OF OIL, GAS, AND MIN  Y NOTICES AND REPORTS  posals to drill new wells, significantly enter plugged wells, or to drill horizor for such proposals.  D  500, Boise, ID, 83703  IP, RANGE, MERIDIAN: 2 Township: 05.0S Range: 04.0W Mer  CAPPROPRIATE BOXES TO INDICATE  ACIDIZE  CHANGE TO PREVIOUS PLANS  CHANGE WELL STATUS  DEEPEN  OPERATOR CHANGE  PRODUCTION START OR RESUME  REPERFORATE CURRENT FORMATION  TUBING REPAIR  WATER SHUTOFF  WILDCAT WELL DETERMINATION  COMPLETED OPERATIONS. Clearly shows and property of the Wasatch and Greater the Wa	DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING  Y NOTICES AND REPORTS ON WELLS  posals to drill new wells, significantly deepen existing wells below eenter plugged wells, or to drill horizontal laterals. Use APPLICATION for such proposals.  PHONE NUMBER: 208 685-7685 Ext  PHONE NUMBER  TITLE Regulatory & Compliance S  PHONE NUMBER  TITLE Regulatory & Compliance S

Sundry Number: 42948 API Well Number: 43013518430000

#### AFFIDAVIT OF NOTICE

State of Idaho	)
	) ss
County of Ada	)

I, Vera Johnson, the affiant herein, being of lawful age and duly sworn upon his oath deposes and states as follows:

Vera Johnson is the Land Administrator for Petroglyph Energy, Inc., an Idaho Corporation, with headquarters located at 960 Broadway Avenue, Suite 500, Boise, ID 83706, and is duly authorized to make this Affidavit on behalf of said corporation.

Petroglyph Energy, Inc. has submitted notices to commingle production from the Wasatch and Green River formations in the following well lying within the boundaries of the Antelope Creek Plan of Cooperative Development – BIA Lease # UTE 14-20-H62-4744:

#### UTE TRIBAL 12-03-E4

This Affidavit is made in accordance with Utah's Oil, Gas and Mining regulation R649-3-22. As operator, Petroglyph Energy, Inc. is the only owner of contiguous oil and gas leases overlying the pool and no notice to other parties is necessary.

Petroglyph Energy, Inc.

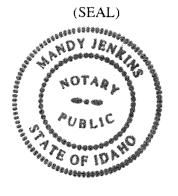
Vera Johnson

State of Idaho ) ss County of Ada )

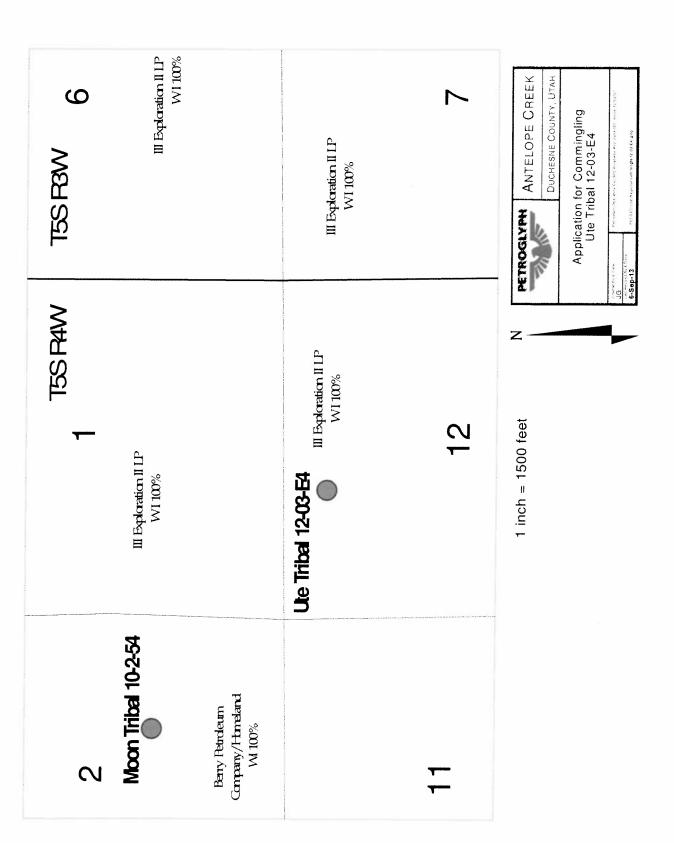
The above and foregoing Affidavit was subscribed and sworn to before me on the \_\_\_\_\_day of September, 2013, by Vera Johnson.

Witness my hand and official seal.

Marchy Tenham Notary Public



Sundry Number: 42948 API Well Number: 43013518430000



Sundry Number: 46923 API Well Number: 43013518430000

	STATE OF UTAH			FORM 9
ı	DEPARTMENT OF NATURAL RESO DIVISION OF OIL, GAS, AND	i	5.LEASE DESIGNATION AND SERIAL NUMBER: 1420H624744	
SUNDR	WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME: Ute In		
Do not use this form for pro current bottom-hole depth, I FOR PERMIT TO DRILL form	posals to drill new wells, significar reenter plugged wells, or to drill ho n for such proposals.	ntly deep rizontal l	en existing wells below aterals. Use APPLICATION	7.UNIT or CA AGREEMENT NAME:
1. TYPE OF WELL Oil Well				8. WELL NAME and NUMBER: Ute Tribal 12-03-E4
2. NAME OF OPERATOR: PETROGLYPH OPERATING C	50			9. API NUMBER: 43013518430000
3. ADDRESS OF OPERATOR: 960 Broadway Avenue, Ste	500 , Boise, ID, 83703		NE NUMBER: 685-7685 Ext	9. FIELD and POOL or WILDCAT: BRUNDAGE CANYON
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0469 FNL 1718 FWL				COUNTY: DUCHESNE
QTR/QTR, SECTION, TOWNSH Qtr/Qtr: NENW Section:	HP, RANGE, MERIDIAN: 12 Township: 05.0S Range: 04.0W	Meridian	· U	STATE: UTAH
11. CHECI	K APPROPRIATE BOXES TO INDI	CATE NA	ATURE OF NOTICE, REPOR	T, OR OTHER DATA
TYPE OF SUBMISSION			TYPE OF ACTION	
	ACIDIZE		LTER CASING	CASING REPAIR
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS		HANGE TUBING	CHANGE WELL NAME
	CHANGE WELL STATUS		OMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN	<b>√</b> F	RACTURE TREAT	NEW CONSTRUCTION
10/15/2013	OPERATOR CHANGE	P	LUG AND ABANDON	PLUG BACK
SPUD REPORT	PRODUCTION START OR RESUME	□ R	ECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION
Date of Spud:	REPERFORATE CURRENT FORMATION	□ s	IDETRACK TO REPAIR WELL	TEMPORARY ABANDON
_	TUBING REPAIR	□ v	ENT OR FLARE	WATER DISPOSAL
DRILLING REPORT Report Date:	WATER SHUTOFF	□ s	I TA STATUS EXTENSION	APD EXTENSION
	WILDCAT WELL DETERMINATION		THER	OTHER:
12. DESCRIBE PROPOSED OR	COMPLETED OPERATIONS. Clearly sh	-	tinent details including dates, d	<u>'</u>
NAME (PLEASE PRINT) Rodrigo Jurado	<b>PHONE NU</b> 435 722-5302	JMBER	TITLE Regulatory & Compliance S	рс
SIGNATURE N/A		<b>DATE</b> 1/17/2014		

RECEIVED: Jan. 17, 2014

Sundry Number: 46923 API Well Number: 43013518430000

FORM 9

STATE OF UTAH	FORINI 9
DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS AND MINING	5. LEASE DESIGNATION AND SERIAL NUMBER: 14-20-H62-4744
SUNDRY NOTICES AND REPORTS ON WELL	S 6. IF INDIAN, ALLOTTEE OR TRIBE NAME: Ute Indian Tribe
Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth.	7. UNIT or CA AGREEMENT NAME:
drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.  1. TYPE OF WELL  OIL WELL  GAS WELL  OTHER	8. WELL NAME and NUMBER:
2. NAME OF OPERATOR:	Ute Tribal 12-03-E4
Petroglyph Operating Company Inc.	4301351843
5. ADDITEGO OF OF ENTITION	HONE NUMBER: 10. FIELD AND POOL, OR WILDCAT: Antelope Creek
4. LOCATION OF WELL	
FOOTAGES AT SURFACE: 469' FNL 1718' FWL	county. Duchesne
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: NENW 12 5S 4W U	STATE: UTAH
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE O	F NOTICE, REPORT, OR OTHER DATA
TYPE OF SUBMISSION TYPE	PE OF ACTION
NOTICE OF INTENT	REPERFORATE CURRENT FORMATION
(Submit in Duplicate)	-
Approximate date work will start: CASING REPAIR NEW CONSTR	
CHANGE TO PREVIOUS PLANS OPERATOR C	
CHANGE TUBING □ PLUG AND AB  ✓ SUBSEQUENT REPORT □ CHANGE WELL NAME □ PLUG BACK	WATER DISPOSAL
(Submit Original Form Only)	(START/RESUME) WATER SHUT-OFF
Date of work completion:	N OF WELL SITE OTHER:
10/15/2013	- DIFFERENT FORMATION
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details inclu	
On 9/24/2013 Petroglyph Operating ran GR/CBL and found ETOC @ Sur 7136-44, 6799-6807, 6752-60, 6428-31, 6417-21, 5990-92, 5949-51, 593 5724-30, 5710-12, 5592-98, 5581-89, 5450-52, 5433-47, 5321-23, 5309-5116-18, 5010-22, 5004-07, 4811-20, 4766-74, 4656-61, 4207-09, 4177-following intervals: 6,417'-7,144': 770 Bbls of fluid containing 30,025#'s of sand, 5,887'-5,992': 975 Bbls of 15% Hcl followed by a 134 Bbls Fresh Water 05,710'-5,786': 572 Bbls of fluid containing 48,400#'s of sand, 5,581'-5,592': 481 Bbls of fluid containing 27,385#'s of sand, 5,309'-5,452': 571 Bbls of fluid containing 49,150#'s of sand, 5,004'-5,022': 468 Bbls of fluid containing 34,900#'s of sand, 4,766'-4,820',4,656'-4,661': 262 Bbls of fluid containing 18,500#'s of sand & 4,133'-4,2 Isolation plugs used were Halliburton 8K Composite Plugs, fluid used was Premium White Sand and guns used were Titan 3-1/8", containing 22.7 g 120* Phased. All plugs were drilled out and cleaned out to PBTD, 7,235' seen. We then ran a pump on 10/15/2013 and put to pump.	face, then on 10/2/2013 perforated the following: 3-35, 5912-14, 5893-97, 5887-89, 5786-89, 5765-67, 13, 5214-16, 5196-5200, 5168-70, 5160-64, 5148-50, 79 & 4133-37. We isolated and fracture treated the Overflush,  Diverflush,  O': 462 Bbls of fluid containing 18,500#'s of sand, 09': 299 Bbls of fluid containing 22,615#'s of sand. So Dyna 22 18# gelled fluid, sand used was 20/40 Mesh ram charges, 0.42" EHD, 23.54" TTP @ 4 SPF @
NAME (PLEASE PRINT) Rodrigo Jurado TITLE	Regulatory Compliance Specialist
NAME (PLEASE PRINT) ROUTIGO JULIADO TITLE	1/16/2014
SIGNATURE DATE	1, 10,2017

(This space for State use only)

STATE OF UTAH  DEPARTMENT OF NATURAL RESOURCES  DIVISION OF OIL, GAS AND MINING									(h 5. l	ighlight LEASE DE	D REPORT [ changes) SIGNATION AND -H62-4744		FORM 8				
WEL	WELL COMPLETION OR RECOMPLETION REPORT AND LOG								6.	6. IF INDIAN, ALLOTTEE OR TRIBE NAME Ute Indian Tribe							
1a. TYPE OF WELL						1		7							A AGREEMENT N	IAMF	
		й	VELL Z		GAS WELL	j	DRY		OTI	IER			-   ``		-H62-4650		
b. TYPE OF WORK NEW WELL	K: HORIZ. L LATS.	] D	EEP-	]	RE- ENTRY	]	DIFF. RESVR.	]	ОТН	IER			8. \		ME and NUMBER ribal 12-03		***************************************
2. NAME OF OPERA Petroglyph		ina Co	mnan	y Inc										API NUMB	ER: 351843		
3. ADDRESS OF OR		ing co	mpan	y, 1110.	***************************************	*************	<del>laineari simuliyyesi mi</del> ns		<del></del>	PHONE	E NUMBE	·R			D POOL, OR WIL	CAT	
P.O. Box 60	P.O. Box 607 CITY Roosevelt STATE UT ZIP 84066 (435) 722-2531 Antelope Creek																
4. LOCATION OF WELL (FOOTAGES) AT SURFACE: 469' FNL, 1718' FWL  11. QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: NENW 12 5S 4W U																	
AT TOP PRODU	CING INTERV	/AL REPOI	RTED BEI	Low: 6	66' FNI	L, 198	33' FW	L									
AT TOTAL DEPTH: 659' FNL, 1966' FWL  12. COUNTY  Duchesne  UT									UTAH								
14. DATE SPUDDED 7/31/2013	D: 1	5. DATE T		HED:	16. DATE	COMPLE 5/201		·: /	ABANDON	ED 🗍	READY	TO PRODU	CE 🔽		VATIONS (DF, R	KB, RT, GL):	<u> </u>
18. TOTAL DEPTH:	MD 7,3			9. PLUG	BACK T.D.:				<del></del>	MULTIPLE C			···········	ļ	982' RKB	ID .	
	TVD 7.3						7.233 7.218		"	710L111 LL O	OM EL	10110, 11011	IVIPALE :		.UG SET:	VD	
22. TYPE ELECTRIC			VICAL LO	GS RUN (S	Submit copy					23.				<u> </u>			<del></del>
ACTR, SDD	SN, Bor	ehole \	Volum	e Plot,	Cemer	nt Vol	lume P	lot		WAS WEL WAS DST DIRECTIO	RUN?		NO NO NO	<u> </u>	YES (S	ubmit analysi: ubmit report) ubmit copy)	s)
24. CASING AND LI	NER RECOR	D (Report	all strings	set in we	ell)												
HOLE SIZE	SIZE/GRA	ADE	WEIGHT	(#/ft.)	TOP (M	D)	воттом	(MD)		EPTH		NT TYPE & F SACKS	SLU VOLUM	RRY E (BBL)	CEMENT TOP	** AMOUI	NT PULLED
26	16 ,	J-55	75	5	0		73									Cor	nductor
12.25	8.625	J-55	24		0		522	2			G	300	6	1	0		
7.875	5.5	J-55	15.	5	0		7,31	12			G	1,105	33	31	0 CBL		
					~~~												
25. TUBING RECOR	n					L					<u> </u>		<u> </u>				***************************************
SIZE	DEPTH S	SET (MD)	PACKE	ER SET (N	ID)	SIZE		DEPTH	SET (MD)	PACKER	R SET (M	D)	SIZE		EPTH SET (MD)	DACKED	SET (MD)
2.875	7,1		177,076	277 021 (19	,	012.6		DEI III	OLI (WD)	TAORE	TOLT (W		JILL		EF ITI SET (WD)	PACKER	GET (MD)
26. PRODUCING INT				<del></del>		**************				27. PERFOR	RATION I	RECORD		L			
FORMATION I	NAME	TOP (	(MD)	вотто	M (MD)	TOP (1	TVD) E	BOTTON	(TVD)	INTERVA	L (Top/Bo	ot - MD)	SIZE	NO. HOL	ES PERF	DRATION ST	ATUS
(A) Wasatch		6,4	17	7,1	44	6,4	00	7,1	27	4,133		7,144	0.42	620	Open 🗸	Squeezed	
(B) Green Riv	er	4,1	133	5,9	92	4,1	16	5,9	75						Open	Squeezed	
(C)											*****				Open	Squeezed	
(D)	***************************************					************									Open	Squeezed	
28. ACID, FRACTUR	E, TREATME	NT, CEME	NT SQUE	EZE, ETC								- inicial and a second a second and a second a second and					CONTRACTOR
DEPTH I	NTERVAL							**************	AMC	UNT AND TY	YPE OF N	MATERIAL					
6,417'-7,144' 700 Bbls of Dyna 22 18# Gelled Fluid containing 30,025#'s of 20/40 Mesh Sand.																	
5,887'-5,992' 975 Bbls of 15% Hcl followed by 134 Bbls fresh water over flush.																	
4,133'-5,786'														10 Mes	sh Sand.		
29. ENCLOSED ATT	····		L													LL STATUS:	
	ICAL/MECHA			CEMENT \	/ERIFICATIO	ON		OLOGIC RE ANA	REPORT		OST REPO	DOGM	DIRECT		JRVEY	POV	V

#### 31. INITIAL PRODUCTION INTERVAL A (As shown in item #26) DATE FIRST PRODUCED: TEST DATE: HOURS TESTED: TEST PRODUCTION OIL - BBL GAS - MCF WATER - BBL: PROD. METHOD: 10/12/2013 11/10/2013 RATES: 70 80 73 Rod Pump CHOKE SIZE: TBG. PRESS CSG. PRESS. API GRAVITY BTU - GAS GAS/OIL RATIO 24 HR PRODUCTION OIL - BBL: INTERVAL STATUS: GAS - MCF WATER - BBL: 32/64 200 190 41.05 RATES: 1,143 70 1 80 73 Open INTERVAL B (As shown in item #26) DATE FIRST PRODUCED: TEST DATE: HOURS TESTED: TEST PRODUCTION OIL - BBL: GAS - MCF WATER - BBL: PROD. METHOD: RATES: CHOKE SIZE: TBG. PRESS. CSG. PRESS API GRAVITY BTU - GAS GAS/OIL RATIO 24 HR PRODUCTION OIL - BBL GAS - MCF WATER - BBI INTERVAL STATUS RATES: INTERVAL C (As shown in item #26) DATE FIRST PRODUCED: TEST DATE: TEST PRODUCTION HOURS TESTED OIL - BBL GAS - MCF WATER - BBL: PROD. METHOD: RATES: CHOKE SIZE TBG. PRESS. CSG. PRESS API GRAVITY BTU - GAS GAS/OIL RATIO 24 HR PRODUCTION OIL - BBI GAS - MCF WATER - BBI INTERVAL STATUS: RATES: INTERVAL D (As shown in item #26) DATE FIRST PRODUCED: TEST DATE: HOURS TESTED: TEST PRODUCTION OIL - BBL GAS - MCF WATER - BBL: PROD. METHOD. RATES: CHOKE SIZE: TBG. PRESS. CSG. PRESS. API GRAVITY BTU - GAS GAS/OIL RATIO 24 HR PRODUCTION OIL - BBL: GAS - MCF WATER - BBI INTERVAL STATUS RATES: 32. DISPOSITION OF GAS (Sold, Used for Fuel, Vented, Etc.) Used for Fuel 33. SUMMARY OF POROUS ZONES (Include Aquifers): 34. FORMATION (Log) MARKERS: Show all important zones of porosity and contents thereof: Cored intervals and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures and recoveries

Formation	Top (MD)	Bottom (MD)	Descriptions, Contents, etc.	Name	Top (Measured Depth)
				Mahogany Garden Gulch B Marker X Marker Y Marker Douglas Creek B Lime Castle Peak Basal Carbonate Wasatch	2,708 3,431 3,838 4,332 4,366 4,475 4,870 5,416 5,825 6,096

35. ADDITIONAL REMARKS (Include plugging procedure)

All Frac and Perf info is condensed. Please see NOI and Subsequent Frac Sundry for a detailed record.

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records.						
NAME (PLEASE PRINT) Rodrigo Jurado	TITLE	Regulatory Compliance Specialist				
SIGNATURE AND SIGNATURE	DATE	3/6/2014				

This report must be submitted within 30 days of

- · completing or plugging a new well
- · drilling horizontal laterals from an existing well bore
- recompleting to a different producing formation
- · reentering a previously plugged and abandoned well
- significantly deepening an existing well bore below the previous bottom-hole depth
- drilling hydrocarbon exploratory holes, such as core samples and stratigraphic tests

Send to: Utah Division of Oil, Gas and Mining 1594 West North Temple, Suite 1210

Box 145801

Salt Lake City, Utah 84114-5801

Phone: 801-538-5340

Fax: 801-359-3940

<sup>\*</sup> ITEM 20: Show the number of completions if production is measured separately from two or more formations.

<sup>\*\*</sup> ITEM 24: Cement Top – Show how reported top(s) of cement were determined (circulated (CIR), calculated (CAL), cement bond log (CBL), temperature survey (TS)).

656.00 686.00 717.00 748.00 779.00

1.40 1.60 1.70 2.00 2.20

108.80 111.90 115.81 115.60 118.30

655.96 685.95 716.94 747.92 778.90

-1.20 -1.47 -1.83

5.96 6.69 7.51 8.41 9.42

5.51 6.26 7.14 8.12 9.24

6.08 6.85 7.73 8.71 9.82

101.37 102.40 103.72 105.09 106.46

1.09 .72 .49 .97

-2.27 -2.78

.00 533.00 564.00 594.00 625.00

1.00 1.10 1.20

.00 102.16 96.40 100.90 96.70

.00 532.98 563.98 593.97 624.97

.00 -.78 -.86 -.94 -1.04

.00 3.64 4.12 4.66 5.28

.00 3.40 3.83 4.31 4.87

.00 3.72 4.21 4.76 5.38

.00 102.16 101.79

.15

101.44 101.12

Measured Depth FT

Incl Angle Deg

Direction

True Vertical Depth

FT N-S

E-W

Vertical Section FT

Distance

Direction

Dogleg Severity Deg/100

Deg

CLOSURE

Deg

Drift



Rig Name: Capstar 334 Company: Petroglyph Location: Duchesne Lease/Well: 12-03-E4 Job Number: UT131407

G.L. or M.S.L.:

# Payzone Directional Services LLC

WINSERVE SURVEY CALCULATIONS
Minimum Curvature Method

Rectangular Coordinates Referenced to Wellhead Vertical Section Referenced to Wellhead Vertical Section Plane 126.30

# Page 1

Declination: 11.13 Grid: True State/Country: UT/USA

RECEIVED: Mar. 06, 2014

Curve Name: Ute Tribal\_12-03-E4\_Actual

Date/Time: 17-Aug-13 / 11:32

File name: C:\DOCUME~1\PAYZONE\DESKTOP\UTETRI~1\UT131407.SVY

3548.00 3640.00 3732.00 3822.00	3092.00 3183.00 3274.00 3365.00 3457.00	2637.00 2727.00 2818.00 2909.00 3001.00	2180.00 2271.00 2363.00 2454.00 2545.00	1724.00 1815.00 1906.00 1997.00 2089.00	1267.00 1358.00 1449.00 1541.00 1632.00	Depth FT 809.00 901.00 992.00 1083.00 1175.00	Measured
6.20 6.10 4.60 4.30	6.40 6.30 6.20 5.80	5.60 6.80 6.50	6.10 6.10 6.40 5.80 6.30	6.50 5.90 6.50 6.30	6.60 6.50 6.40 6.00 6.70	Angle Deg 2.20 2.70 3.40 4.10 5.60	Incl
126.10 126.40 119.40 119.00	128.20 126.50 126.90 126.40 125.90	124.30 129.30 131.40 130.60 131.20	123.30 126.40 130.60 128.90 125.70	126.30 123.70 121.60 120.70 125.50	126.40 124.70 127.80 128.00 128.00 127.90	Direction Deg 121.50 135.20 135.50 130.20 126.50	Drift
3532.96 3624.44 3716.03 3805.76	3079.63 3170.07 3260.51 3350.97 3442.46	2627.40 2716.92 2807.33 2897.71 2989.17	2172.98 2263.47 2354.92 2445.41 2535.90	1719.74 1810.21 1900.67 1991.11 2082.53	1265.62 1356.02 1446.45 1537.91 1628.35	Vertical Depth 808.88 900.79 991.66 1082.47 1174.14	True
-172.71 -178.54 -183.25 -186.66	-143.36 -149.52 -155.53 -161.44 -167.12	-111.29 -116.90 -123.62 -130.54 -137.09	-82.07 -87.59 -93.83 -100.02 -105.82	-54.64 -60.28 -65.57 -70.82 -76.42	-23.89 -29.92 -35.96 -42.07 -48.26	N-S FT -3.36 -5.82 -9.26 -13.29 -18.08	
234.54 242.49 249.63 255.73	195.00 203.06 211.13 219.08 226.84	156.55 164.00 171.91 179.86 187.43	117.92 125.86 133.68 141.11 148.75	76.11 84.15 92.43 101.11 109.69	35.21 43.66 51.90 59.74 67.68	E-W FT 10.42 13.45 16.85 21.23 27.35	
291.27 301.12 309.67 316.60	242.03 252.17 262.23 272.14 281.75	192.06 201.38 211.73 222.23 232.22	143.62 153.29 163.29 172.94 182.53	93.68 103.51 113.31 123.42 133.65	42.52 52.90 63.12 73.05 83.11	Section FT 10.38 14.28 19.07 24.98 32.75	Vertical
291.27 301.12 309.67 316.60	242.03 252.17 262.23 272.14 281.75	192.08 201.40 211.74 222.24 232.22	143.67 153.34 163.33 172.97 182.55	93.69 103.51 113.33 123.45 133.69	42.55 52.93 63.14 73.07 83.12	Distance FT 10.95 14.66 19.23 25.04 32.79	CL
126.37 126.36 126.28 126.13	126.32 126.36 126.38 126.38 126.39 126.38	125.41 125.48 125.72 125.72 125.97 126.18	124.84 124.84 125.06 125.33 125.43	125.67 125.62 125.35 125.01 124.87	124.15 124.43 124.72 125.15 125.49	Direction Deg 107.86 113.39 118.79 122.04 123.47	LOSURE
.44 .11 1.78 .34	.57 .21 .12 .13	.78 .97 .61 .35	.51 .36 .59 .66	.30 .73 .70 .25	1.09 .24 .40 .42 .77	Severity Deg/100 .41 .83 .77 .86	Dogleg

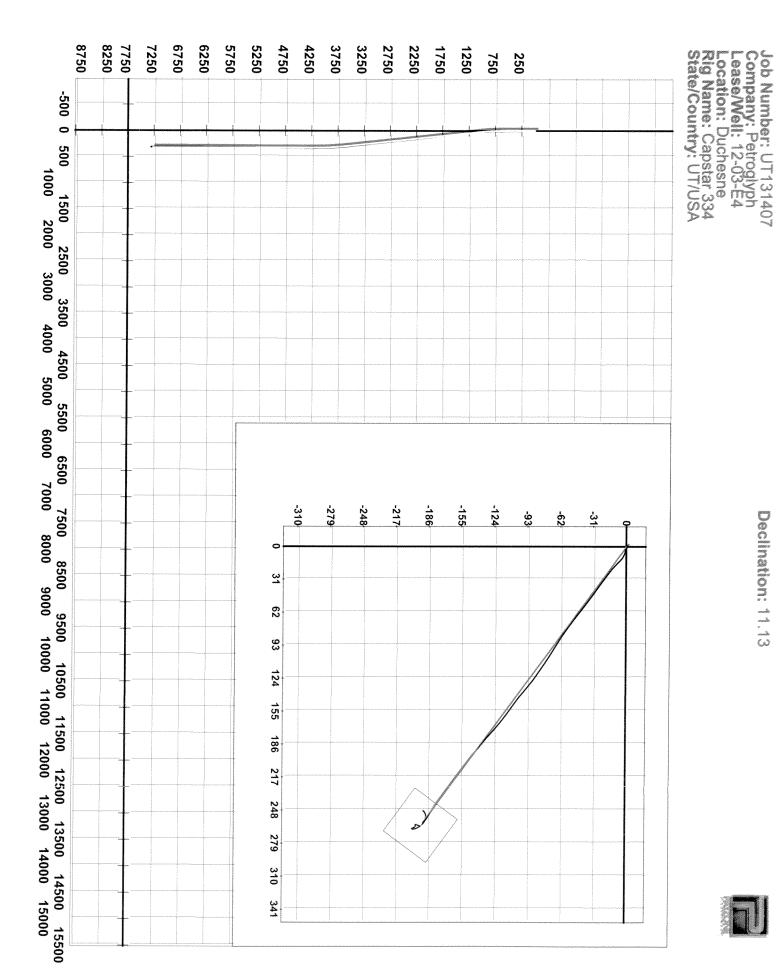
RECEIVED: Mar. 06, 2014

	6651.00 6743.00 6834.00 6925.00	6194.00 6286.00 6377.00 6469.00 6560.00	5738.00 5829.00 5921.00 6012.00 6103.00	5281.00 5373.00 5464.00 5555.00 5646.00	4825.00 4916.00 5008.00 5099.00 5190.00	4369.00 4460.00 4551.00 4643.00 4734.00	3913.00 4006.00 4096.00 4188.00 4278.00	Measured Depth FT
	.40 .50 .40	.30 .30 .30	.30	.80 .70 .80 .60	.50 .40 1.30 .90	.90 .80 .70 .40	3.20 2.90 1.90 1.10 .70	Incl Angle Deg
	264.90 264.30 249.30 247.10	292.00 293.80 291.00 260.00 265.40	303.23 298.20 305.40 300.00 283.80	327.60 306.40 302.00 306.20 310.20	258.01 247.91 14.30 31.70 4.70	344.54 341.70 324.50 318.10 286.30	134.60 145.20 162.30 192.50 200.00	Drift Direction Deg
	6634.19 6726.19 6817.18 6908.18	6177.20 6269.19 6360.19 6452.19 6543.19	5721.20 5812.20 5904.20 5995.20 6086.20	5264.24 5356.23 5447.22 5538.21 5629.21	4808.28 4899.28 4991.27 5082.26 5173.25	4352.31 4443.30 4534.29 4626.29 4717.29	3896.57 3989.44 4079.36 4171.33 4261.32	True Vertical Depth
J	-187.47 -187.54 -187.69 -187.93	-187.87 -187.62 -187.41 -187.37 -187.43	-189.02 -188.74 -188.48 -188.22 -188.05	-192.45 -191.57 -190.90 -190.19 -189.51	-197.15 -197.36 -196.46 -194.86 -193.62	-200.65 -199.36 -198.30 -197.54 -197.16	-190.09 -193.85 -197.14 -199.46 -200.82	RT-S
,	253.07 252.35 251.66 251.07	255.66 255.07 254.56 254.10 253.63	257.91 257.44 257.03 256.63 256.19	262.26 261.46 260.48 259.43 258.55	262.21 261.53 261.49 262.12 262.55	264.98 264.59 264.07 263.48 262.91	260.52 263.71 265.47 265.74 265.36	E-W
	314.94 314.41 313.94 313.60	317.27 316.65 316.11 315.71 315.36	319.76 319.21 318.73 318.26 317.80	325.29 324.13 322.94 321.67 320.56	328.04 327.61 327.05 326.61 326.22	332.34 331.26 330.22 329.29 328.60	322.50 327.29 330.66 332.25 332.75	Vertical Section FT
	314.95 314.41 313.95 313.61	317.27 316.65 316.11 315.71 315.36	319.76 319.21 318.73 318.26 317.80	325.29 324.13 322.94 321.67 320.56	328.06 327.64 327.07 326.61 326.22	332.38 331.29 330.24 329.31 328.62	322.50 327.29 330.66 332.26 332.78	C L Distance FT
	126.53 126.62 126.72 126.72	126.31 126.34 126.36 126.40 126.46	126.24 126.25 126.25 126.26 126.26	126.27 126.23 126.24 126.25 126.24	126.94 127.04 126.92 126.63 126.41	127.13 127.00 126.90 126.86 126.87	126.12 126.32 126.32 126.60 126.89 127.12	OSURE Direction Dea
	.11	.12 .01 .11 .17	.23 .04 .03	.56 .32 .13 .06	.26 .14 1.71 .57	1.68 .12 .27 .23	1.64 .69 1.35 1.19 .46	Dogleg Severity Dea/100

RECEIVED: Mar. 06, 2014

<b>Projectic</b> 7322.00	7259.00	7199.00	7108.00	7017.00	Measured Depth FT
to Bit					Incl Angle Deg
205.10	205.10	211.50	237.60	243.20	Drift Direction Deg
7305.16	7242.17	7182.17	7091.17	7000.18	True Vertical Depth
-190.31	-189.81	-189.35	-188.71	-188.23	FT N-S
248.43	248.67	248.92	249.59	250.42	E-W
312.88	312.78	312.70	312.87	313.26	Vertical Section FT
312.95	312.83	312.75	312.90	313.27	C L Distance FT
127.45	127.35	127.26	127.09	126.93	CLOSURE Direction Deg
		37			Dogleg Severity Deg/100

RECEIVED: Mar. 06, 2014





#### STATE OF UTAH

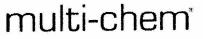
DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS AND MINING

				BBH - 1110
REPORT	OF WATER	ENCOUNTERED	DURING	DRILLING

Well name and	d number: <u>Ute</u>	Tribal 12-03-E	4		
API number: _4	1301351843				
Well Location:	QQ <u>NENW</u> Se	ction 12 T	ownship <u>5S</u> Range <u>4W</u>	_County _Duchesne	
Well operator:	Petroglyph O	perating Comp	any, Inc.		
Address:	P.O. Box 607				
	city Roosevel	t	state UT zip 84066	Phone: (435) 722-253	1
Drilling contract	ctor: ProPetro	Services			
Address:	1422 East 15	00 South			
	city Vernal		state UT zip 84078	Phone: (435) 789-173	35
Water encount	ered (attach ad	dditional pages	s as needed):		
Γ	DEF	 PTH	VOLUME	QUALI	TY
	FROM	то	(FLOW RATE OR HEAD)	(FRESH OR	SALTY)
	0	515	∠ 1	Salty	
_					
Formation tops		Mentionerous relativements and an activities and activities activities and activities activities and activities activities and activities activities activities and activities activiti	2	3	
(Top to Bottom)	4		5	6	
	7				
	10		11	12	**************************************
lf an analysis h	as been made	of the water e	ncountered, please attach a d	opy of the report to this fo	orm.
I hereby certify th	at this report is t	rue and complete	to the best of my knowledge.		
NAME (PLEASE PRIN	Rodrigo Jura	ado	TITLE	Regulatory Compliance	Specialist
SIGNATURE /	Kanto let		DATE	8/2/2013	

#### **Multi-Chem Analytical Laboratory**

1553 East Highway 40 Vernal, UT 84078



A HALLIBURTON SERVICE

#### Water Analysis Report

Production Company:

PETROGLYPH ENERGY INC

Well Name:

UTE TRIBAL 12-03-E4

Sample Point: Sample Date:

Sample ID:

Rig 450 feet 8/5/2013 WA-249784 Sales Rep:

James Patry

Lab Tech:

**Gary Winegar** 

Scaling potential predicted using ScaleSoftPitzer from Brine Chemistry Consortium (Rice University)

Sample Specific	計量的問題
Test Date:	8/5/2013
System Temperature 1 (°F):	60.00
System Pressure 1 (psig):	1300.00
System Temperature 2 (°F):	180.00
System Pressure 2 (psig):	14.70
Calculated Density (g/ml):	1.04
pH:	11.00
Calculated TDS (mg/L):	61507.89
CO2 in Gas (%):	0.00
Dissolved CO <sub>2</sub> (mg/L)): H <sub>2</sub> S in Gas (%):	
H2S in Water (mg/L):	0.00

	Analysis @ Prop	perties in Sample Specifics	
Cations	mg/L	Anions	mg/L
Sodium (Na):	21732.50	Chloride (Cl):	25000.00
Potassium (K):	0.00	Sulfate (SO4):	64.00
Magnesium (Mg):	5.10	Bicarbonate (HCO3):	14640.00
Calcium (Ca):	10.00	Carbonate (CO3):	
Strontium (Sr):	2.00	Acetic Acid (CH3COO)	
Barium (Ba):	1.20	Propionic Acid (C2H5COO)	
Iron (Fe):	3.50	Butanoic Acid (C3H7COO)	
Zinc (Zn):	0.11	Isobutyric Acid ((CH3)2CHCOO)	
Lead (Pb):	0.20	Fluoride (F):	
Ammonia NH3:		Bromine (Br):	
Manganese (Mn):	0.06	Silica (SiO2):	49.22

Notes:

B=648 Al=3.4

(PTB = Pounds per Thousand Barrels)

Calcium Carbonate		Barium Sulfate		Barium Sulfate		Barium Sulfate		DOMESTIC OF	ron Ifide		on onate		sum 2H2O	FINE WILLIAM	stite 504		alite aCl		lfide
Temp (°F)	PSI	SI	РТВ	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	51	PTB	SI	PTB		
180	14	2.25	8.70	0.00	0.00	0.00	0.00	3.28	2.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
166	157	2.21	8.70	0.00	0.00	0.00	0.00	3.24	2.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
153	300	2.17	8.69	0.00	0.00	0.00	0.00	3.19	2.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
140	443	2.13	8.69	0.00	0.00	0.00	0.00	3.13	2.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
	585	2.10	8.68	0.00	0.00	0.00	0.00	3.07	2.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
126		2.06	8.68	0.00	0.00	0.00	0.00	3.01	2.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
113	728		8.67	0.00	0.00	0.00	0.00	2.95	2.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
100	871	2.03		0.00	0.00	0.00	0.00	2.88	2.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
86	1014	2.01	8.67			0.00	0.00	2.80	2.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
73	1157	1.98	8.66	0.00	0.00				-1-		0.00	0.00	0.00	0.00	0.00	0.00	0.00		
60	1300	1.95	8.65	0.00	0.00	0.00	0.00	2.72	2.54	0.00	0.00	0.00		0.00		0.00			

Hemihydrate CaSO4~0.5H2O			CARROLL MANAGEMENT AND ADDRESS OF THE PARTY	Anhydrate CaSO4				Zinç Carbonate		Lead Sulfide		Mg Silicate		Ca Mg Silicate		Silicate	
Temp (°F)	PSI	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB
180	14	0.00	0.00	0.00	0.00	0.00	0.00	2.05	0.07	0.00	0.00	11.89	10.19	5.89	15.93	16.72	2.72
166	157	0.00	0.00	0.00	0.00	0.00	0.00	1.95	0.07	0.00	0.00	11.66	10.19	5.75	15.93	16.67	2.72
153	300	0.00	0.00	0.00	0.00	0.00	0.00	1.84	0.07	0.00	0.00	11.44	10.19	5.62	15.93	16.63	2.72
	443	0.00	0.00	0.00	0.00	0.00	0.00	1.72	0.07	0.00	0.00	11.22	10.19	5.50	15.93	16.61	2.72
140			0.00	0.00	0.00	0.00	0.00	1.58	0.07	0.00	0.00	11.01	10.19	5.39	15.93	16.60	2.72
126	585	0.00					0.00	1.43	0.07	0.00	0.00	10.81	10.19	5.29	15.93	16.61	2.72
113	728	0.00	0.00	0.00	0.00	0.00	0.00	1.43							45.00	10.01	2.72
100	871	0.00	0.00	0.00	0.00	0.00	0.00	1.27	0.07	0.00	0.00	10.62	10.19	5.19	15.93	16.64	2.12
86	1014	0.00	0.00	0.00	0.00	0.00	0.00	1.09	0.07	0.00	0.00	10.43	10.19	5.12	15.93	16.69	2.72
73	1157	0.00	0.00	0.00	0.00	0.00	0.00	0.89	0.06	0.00	0.00	10.26	10.19	5.06	15.93	16.76	2.72
60	1300	0.00	0.00	0.00	0.00	0.00	0.00	0.68	0.06	0.00	0.00	10.11	10.19	5.01	15.93	16.86	2.72

RECEIVED: Mar. 06, 2014

rthics

#### **Multi-Chem Analytical Laboratory**

1553 East Highway 40 Vernal, UT 84078



A HALLIBURTON SERVICE

#### Water Analysis Report

